

Meeting California's Need for College Graduates

A Regional Perspective



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California needs 1.1 million more workers with bachelor's degrees by 2030 to keep up with economic demand. More college graduates would mean higher incomes, greater economic mobility, more tax revenue, and less demand for social services. In addressing this projected shortfall, three regions will play an especially critical role: Los Angeles County, the Inland Empire, and the San Joaquin Valley. Indeed, improving college outcomes in these regions could help close more than half of the statewide skills gap.

Boosting graduation rates for those already in college will have the greatest impact, but enrolling more freshmen and transfer students is also crucial. Among the three regions, Los Angeles County is in the best position, offering an array of higher education opportunities and a strong labor market for highly educated workers. In contrast, despite solid high school graduation rates, the Inland Empire and the San Joaquin Valley see low rates of college completion. In the Inland Empire, many high school graduates never enroll in college, and too often college students fail to earn their degree. In the San Joaquin Valley, many students attend community college but never successfully transfer to a four-year institution. Further, our projections suggest that, given expected population growth, these two regions are somewhat underresourced with respect to public universities—with more students from the region likely to pursue higher education than can be served by existing regional capacity.

Despite the challenges ahead, considerable progress has already occurred. Student preparation for college is up in all three regions, as are college enrollment and graduation rates. Our research highlights several opportunities to build on this progress:

- Increase capacity at four-year universities by continuing to focus on four-year graduation rates and encouraging satellite campuses.
- Streamline the transfer pathway by aligning student success initiatives among community colleges, public universities, and private nonprofit colleges in the same region.
- Develop regional promise programs with common standards to reduce inequities and expand reach beyond what local programs can offer.
- Support regional data-sharing partnerships, such as the Central Valley Higher Education Consortium and Growing Inland Achievement, to promote the coordination and evaluation of regional efforts.

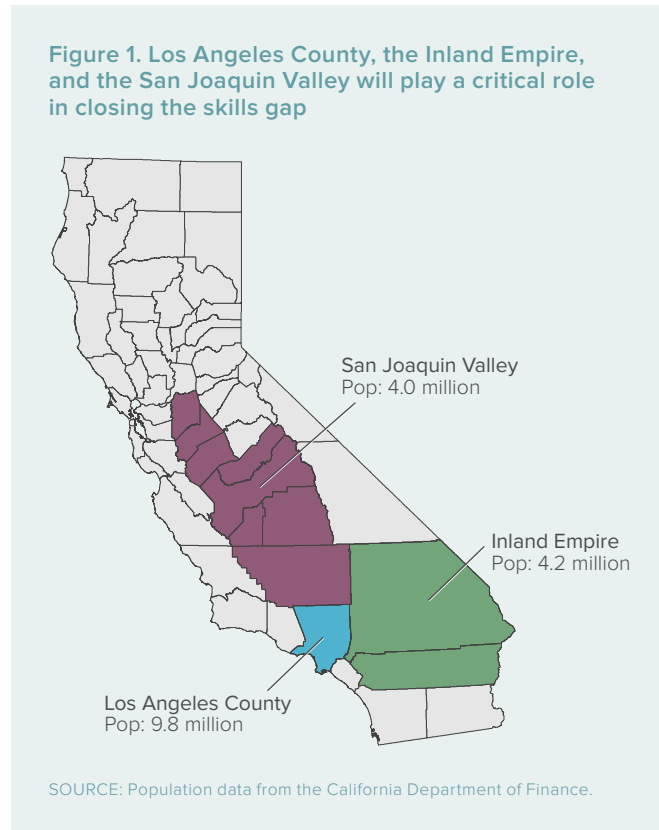
Since most students attend college relatively close to home, an integrated, regional approach can be an efficient way to expand institutional capacity, make it easier and more affordable for qualified students to enroll in four-year colleges, and evaluate the effectiveness of new initiatives. Regional action toward these goals is essential to continue recent successes and further improve educational outcomes—thereby increasing economic opportunities in these key regions and across the state.

Introduction

By 2030, California will need to produce 1.1 million more college-educated workers—above and beyond the current pace—to satisfy the needs of an increasingly high-skilled economy (Johnson, Cuellar Mejia, and Bohn 2015). To close this gap, the state will need to improve access to college, increase the number of students who transfer from community colleges to four-year institutions, and boost graduation rates for students already enrolled in college. Since proximity is an important factor in students’ college decisions, California’s higher education systems must coordinate and act regionally to improve student outcomes.

The state cannot meet the projected shortfall without substantial progress in college graduation for under-represented groups that make up a sizable share of California’s youth, including low-income, first-generation, Latino, and African American students. We focus on three large and diverse regions that will play a crucial role in whether or not the state successfully closes the skills gap: Los Angeles County, the Inland Empire, and the San Joaquin Valley (Figure 1).¹ Low-income and first-generation students constitute the majority of students in each of these regions, and young adults are a disproportionately large share of the population in the Inland Empire and the San Joaquin Valley.

To inform and motivate regional action, this report analyzes demographic, college preparation, and college graduation data from these regions; presents regional estimates of the number of additional bachelor’s degrees necessary to close the skills gap by 2030; identifies challenges and highlights innovative approaches; and provides policy recommendations that build on promising efforts. Although this report focuses on three key regions, policy insights apply to other parts of the state as well.



Regional Profiles

Demographics

Together, Los Angeles County, the Inland Empire, and the San Joaquin Valley are home to almost half of the state’s population, with nearly 10 million residents in Los Angeles County and more than 4 million residents each in the Inland Empire and the San Joaquin Valley (Figure 1). Latinos will soon constitute a majority of the population in each region. As in the rest of the state, African Americans make up less than 10 percent of the population in each region. While Los Angeles County has a relatively large and growing Asian population, Asian Americans are underrepresented in the Inland Empire and the San Joaquin Valley compared to the rest of the state.

These large regions are similar in that they are home to high numbers of young adults, the population most likely to attend college. However, households in these regions tend to have lower

incomes compared to the statewide average (Figure 2). In particular, these regions have disproportionately high shares of children in poverty, many with parents who never attended college.² The demographic composition of these regions has implications for college outcomes: low-income students, Latinos, and African Americans are less likely to graduate from college than other students.

College Preparation and Completion

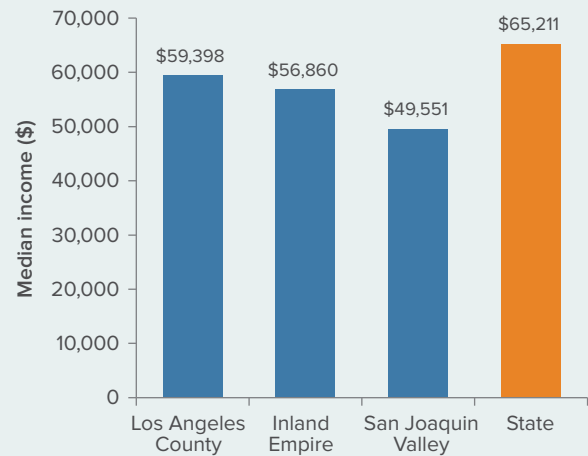
Though increasing numbers of students in these regions are graduating high school and meeting college readiness standards, this has not fully translated into higher rates of college completion.

Los Angeles County, the Inland Empire, and the San Joaquin Valley have all seen notable improvements in high school graduation and college-preparatory rates. The share of entering 9th graders who graduate in four years has increased about 10 percentage points over the past five years, with the Inland Empire and the San Joaquin Valley now seeing slightly higher high school graduation rates (84% and 83%, respectively) than the statewide average (82%). Los Angeles County has also seen improvement (79%), though it still lags behind the rest of the state. In each region, Latinos and African Americans have seen especially strong gains in high school graduation rates—an encouraging trend that has served to narrow racial/ethnic achievement gaps.³

But high school graduation does not necessarily indicate college readiness. To be eligible for admission to the University of California (UC) and California State University (CSU), students must complete a set of high school courses, known as a–g courses.⁴ The share of students fulfilling this requirement has grown substantially in recent years in each region (Figure 3). In all three regions and across the state, these gains were experienced by all racial/ethnic groups and were especially strong among Latinos. However, there is room for improvement. In the Inland Empire and the San Joaquin Valley, college preparation still falls far short of statewide levels, and large racial/ethnic gaps in college preparation remain both statewide and regionally.⁵

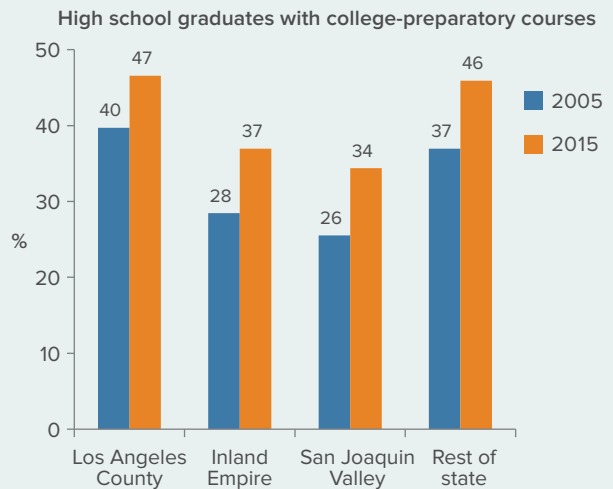
Although these regions produce more than half of the state’s high school diplomas, regional public universities award only about a third of the state’s bachelor’s degrees (Table 1). In Los Angeles County, bachelor’s-degree production is commensurate with the county’s overall population and

Figure 2. Median household income is relatively low in the three regions



SOURCE: US Census Bureau, 2015 American Community Survey.

Figure 3. Despite gains in college preparation, the Inland Empire and the San Joaquin Valley still lag behind the rest of the state



SOURCE: Authors’ calculations based on California Department of Education data.

Table 1. The three regions award more than half of the state’s high school diplomas but only 36 percent of its college degrees

	Regional share of state			
	Population	High school diplomas	A–G graduates	Bachelor’s degrees awarded
Total (three regions)	48%	52%	48%	36%
Los Angeles County	26%	25%	26%	24%
Inland Empire	11%	14%	12%	6%
San Joaquin Valley	11%	13%	10%	6%

SOURCES: Authors’ calculations based on data from the California Department of Finance, California Department of Education, University of California, and California State University.

NOTES: Population data from 2016. Data on high school diplomas, a–g graduates, and bachelor’s degrees awarded from 2015–16.

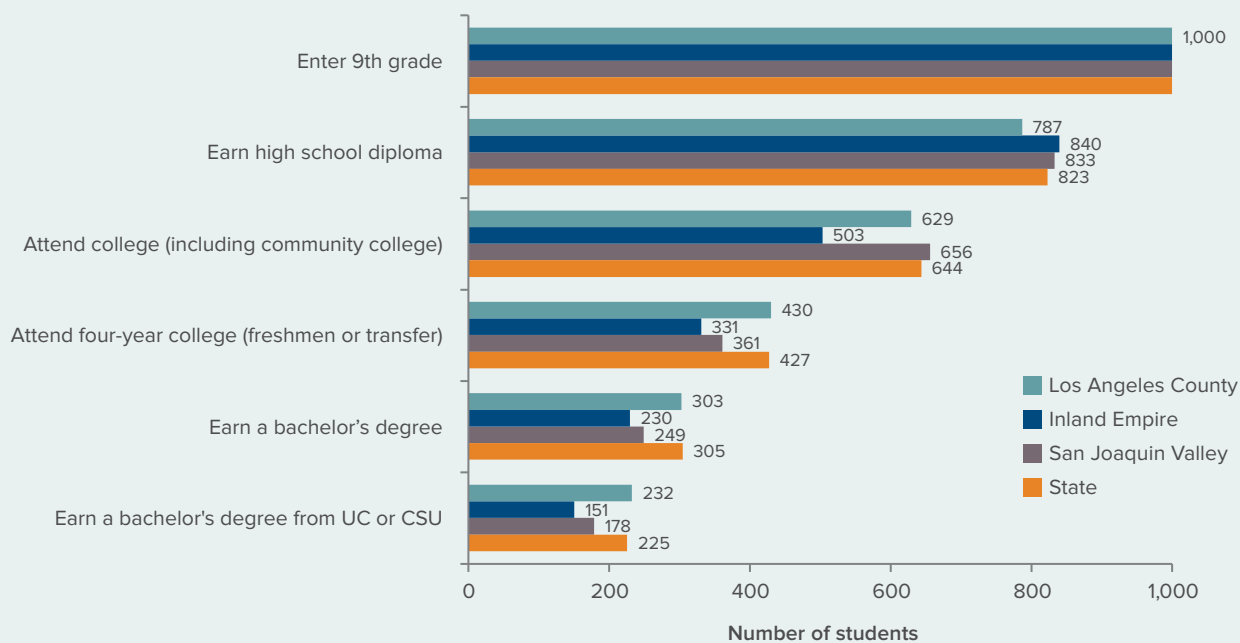
number of high school graduates. In contrast, the Inland Empire and the San Joaquin Valley together only award about 12 percent of the state’s bachelor’s degrees, even though they produce 27 percent of California’s high school diplomas. A small part of this gap can be attributed to college preparation, with high school graduates from the Inland Empire and the San Joaquin Valley less likely to have passed a–g courses than their counterparts in the rest of the state (Figure 3). Even so, as discussed later in this report, these two regions appear to be under-resourced with respect to public universities, with relatively low enrollments (and hence college graduates) given their large numbers of high school graduates.

To some extent, regional educational outcomes reflect and drive economic opportunities. Here again, Los Angeles County stands apart, with a bifurcated economy offering many high-skilled and high-wage jobs but also large numbers of low-skilled and low-wage jobs. In contrast, both the Inland Empire and the San Joaquin Valley economies have a high proportion of low-skilled jobs and low wages. Nevertheless, among bachelor’s-degree holders, unemployment is very low across regions. For example, in the San Joaquin Valley, the overall unemployment rate is almost 10 percent, more than twice as high as the statewide rate (4.5%).⁶ But unemployment rates for college graduates in this region are no higher than in the rest of the state, highlighting the economic benefits of a college degree across regions.⁷

The Higher Education Pipeline

Graduating from college is the culmination of a long educational journey that begins as early as preschool. Critical points in the pipeline include high school graduation, the transition from high school to college, persistence in college, and transfer from community college to a four-year institution. Based on current rates of high school graduation, college enrollment, and college completion, for every 1,000 9th graders in California, 225 will earn a bachelor’s degree at UC or CSU (Figure 4).

Figure 4. California's higher education pipeline: 9th grade to a bachelor's degree



SOURCES: Authors' calculations based on prevailing rates of high school completion, college enrollment, and college completion. Data sources include the California Department of Education, the California Community Colleges, the University of California, California State University, and the Integrated Postsecondary Education Data System.

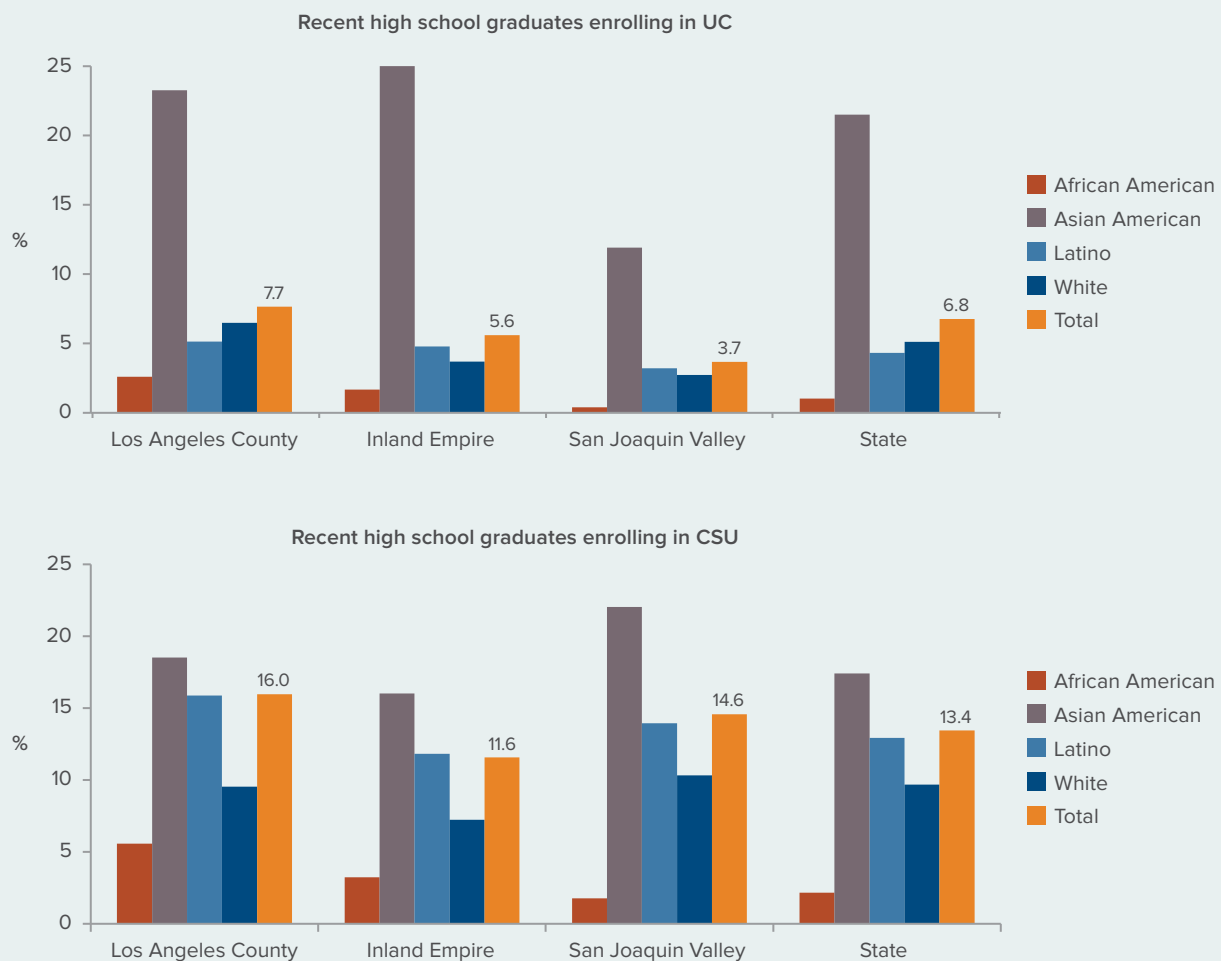
NOTE: See Technical Appendix A for details on data and methods.

When do students fall out of this pipeline? This varies across regions:

- In Los Angeles County, the share of students earning a bachelor's degree at UC or CSU is slightly higher than statewide and much higher than in the Inland Empire or the San Joaquin Valley—even though the region has lower high school graduation rates.
- The Inland Empire, despite having high school graduation rates that are higher than the statewide average, fares particularly poorly with respect to college enrollment, with by far the fewest students who successfully transition from high school to college.
- The San Joaquin Valley has high rates of high school graduation and community college enrollment but low rates of completion at four-year colleges.

The transition from high school graduation to college enrollment is particularly important: high school graduates who go directly to four-year colleges are much more likely to earn a bachelor's degree than those who enroll in community colleges. When we look at the share of recent college graduates who enroll in a UC or CSU, we see regional and racial/ethnic differences (Figure 5). Compared to the rest of the state, recent high school graduates in the Inland Empire and the San Joaquin Valley are less likely to attend UC, and high school graduates from the Inland Empire are also underrepresented at CSU. Across all regions, Asian high school graduates are much more likely than other ethnic groups to enroll in UC, with similar but less pronounced patterns for CSU.⁸ Notably, in every region, Latino high school graduates are more likely to attend CSU than white high school graduates. For every region and ethnic group, men are less likely to enroll in four-year public universities than women.⁹

Figure 5. The transition from high school to public universities varies across regions and ethnic groups



SOURCES: Authors' calculation based on 2015 data provided by the California Department of Education, University of California, and California State University.

Regional Contributions to Closing the Gap

Closing the statewide skills gap will require more bachelor's degrees from every higher education sector in the state, including not only public universities but also private nonprofit colleges (Table 2). For CSU and UC, PPIC has projected the relative contribution that improvements in access, transfer, and graduation rates could play in closing the gap (Johnson 2016). For CSU, improvements in graduation rates could generate about half of the additional degrees, with the other half coming from improvements in access for both first-time freshmen and transfer students. At UC, where graduation rates are already quite high, increased access would account for more than 70 percent of the additional degrees awarded (Table 3).

Table 2. All higher education sectors will need to increase the number of degrees awarded to close the gap

Number of bachelor's degrees awarded, 2015–16 through 2029–30			
	Baseline scenario	Closing-the-gap scenario	Difference
All California colleges and universities	3,072,000	4,149,000	1,077,000
California State University	1,344,000	1,825,000	481,000
University of California	752,000	1,003,000	251,000
Private nonprofit colleges	584,000	790,000	206,000
Other	392,000	531,000	139,000

SOURCE: PPIC (Johnson 2016).

Table 3. At CSU and UC, improvements in access and completion will be required to close the skills gap

Number of additional bachelor's degrees awarded, 2015–16 through 2029–30			
	CSU	UC	CSU and UC
Total increase in degrees	481,000	251,000	732,000
Increase due to additional freshmen admits	66,000	120,000	186,000
Increase due to additional transfer students	178,000	61,000	239,000
Increase due to higher graduation rates	237,000	70,000	307,000

SOURCE: PPIC (Johnson 2016).

To map the statewide skills gap onto different regions, we develop three separate projections that address the following questions:¹⁰

1. How many degrees will regions produce under the current status quo?

This baseline scenario assumes business as usual, with each region awarding the same share of statewide bachelor's degrees in the future as in the recent past. In this scenario, the statewide degree gap is 1.1 million.

2. To close the statewide skills gap, how many high school graduates and young adults from the region would need to go to college?

This need-based scenario identifies where the greatest demand for postsecondary education is likely to originate, although some of these students will necessarily or by choice enroll in colleges outside their local region. Drawing on the statewide closing-the-gap projections above, these need-based estimates are based on the average of the projected regional share of the state's high school graduates and the projected regional share of the state's young-adult population.

3. To close the statewide skills gap, how many additional degrees will regional universities need to produce, assuming no change in the regional share of bachelor's degrees?

This capacity scenario considers the regional supply of higher education institutions. Drawing on the statewide closing-the-gap projections above, these capacity estimates assume that each region will continue to contribute the same share of bachelor's degrees to the statewide total as it has in the recent past.

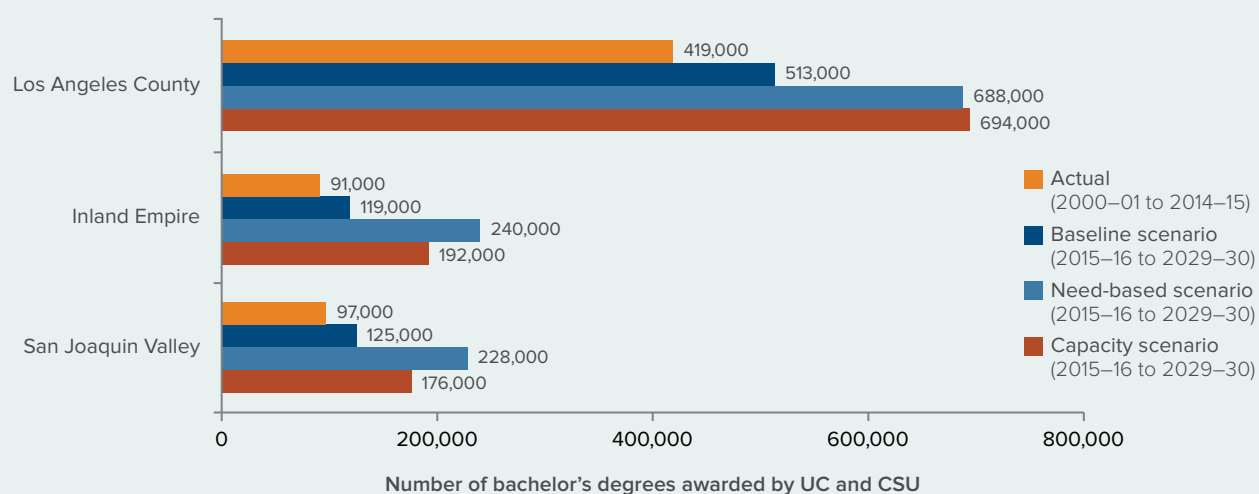
The difference between the need-based and capacity scenarios provides an indication of unmet local demand. Within a region, the lack of institutional capacity to serve a growing demand for higher education could discourage the educational prospects of those who may be qualified and interested in pursuing higher education but unable or unwilling to attend a college far from home. However, it is important to note that while most students attend college within their home region, many do not. At CSU, where most campuses give admission priority to students from local areas, 67 percent of students come from high schools in the same or an adjacent county. About one in five students at UC campuses—which expect to draw students from across the state—come from high schools in the same or an adjacent county.¹¹

As shown in Figure 6 and Table 4, under both the need-based and capacity scenarios, the number of degrees required to close the skills gap would represent a large increase over the baseline. But we see differences across regions.

Los Angeles County is in a relatively good position to meet future need, with our need-based scenario matching up well with our capacity scenario. The region is home to six medium- to large-size public universities (UCLA and CSU campuses at Long Beach, Northridge, Los Angeles, Pomona, and Dominguez Hills) that altogether could meet the demands of a relatively slow-growing population. The CSU campuses are better positioned to handle increased need, whereas UCLA faces greater capacity constraints.

In contrast, institutional capacity is projected to fall short of population-based demand in both the Inland Empire (home to UC Riverside and CSU San Bernardino) and the San Joaquin Valley (home to UC Merced and CSU campuses at Bakersfield, Fresno, and Stanislaus). There are several reasons for this: First, in both regions, enrollment in public universities is already lower than we would expect given large populations. Currently, both regions export more college-bound students than they import from other parts of the state. This out-migration partly reflects the number and perhaps the desirability of regional public universities.¹² Second, both regions are projected to experience more population growth, including among young adults and high school graduates, than in the rest of the state. And third, despite recent progress, there is much more room for improvement in college preparation in the Inland Empire and the San Joaquin Valley than in other regions. As more and more high school graduates in those regions meet college-preparatory requirements, demand for college will increase. In the Inland Empire, capacity at CSU is especially weak relative to need, while in the San Joaquin Valley capacity falls short of need at both UC and CSU.

Figure 6. Large regional increases in bachelor's degrees are needed to close the skills gap



SOURCE: Authors' projections.

NOTE: See Technical Appendix A for methods.

Table 4. Higher education capacity in the Inland Empire and the San Joaquin Valley is projected to fall short

	Los Angeles County	Inland Empire	San Joaquin Valley
University of California			
Actual (2000–01 to 2014–15)	109,000	50,000	5,000
Baseline scenario (2015–16 to 2029–30)	123,000	70,000	16,000
Need-based scenario (2015–16 to 2029–30)	163,000	129,000	67,000
Capacity scenario (2015–16 to 2029–30)	136,000	127,000	43,000
California State University			
Actual (2000–01 to 2014–15)	309,000	41,000	92,000
Baseline scenario (2015–16 to 2029–30)	391,000	49,000	109,000
Need-based scenario (2015–16 to 2029–30)	525,000	112,000	161,000
Capacity scenario (2015–16 to 2029–30)	559,000	65,000	133,000

SOURCE: Authors' projections.

NOTE: See Technical Appendix A for methods.

How Do Regions Increase the Number of College Graduates?

In all three regions, the single most important way to increase the number of college graduates is to improve completion rates for students already enrolled in college (Table 5). This strategy is especially promising at CSU, which enrolls most university students statewide. Focusing on college completion has the added advantage of being cost-effective for both the state and students: getting a student to finish the last year or two of college is relatively inexpensive compared to enrolling a large number of new college students.

Improving transfer rates from community colleges to four-year colleges is another key strategy. This is especially true for the San Joaquin Valley, which has relatively high rates of enrollment in community colleges but very low rates of transfer to four-year colleges. Opportunities to improve transfer also abound in Los Angeles County, with its large and extensive network of community colleges and public universities. In contrast, the Inland Empire has relatively low enrollment in both community colleges and four-year colleges, somewhat limiting the potential for transfer in the near term.

Finally, enrolling more students as first-time freshmen will also be required. The Inland Empire, with its low rates of college enrollment, stands to gain the most with this strategy. Despite having higher graduation rates from high school than the state and either of the other regions, the Inland Empire has by far the lowest share of students that go on to college. Arguably, the Inland Empire is underresourced in terms of CSU campuses, with only one campus serving a population of more than 4 million.¹³

To be clear, each of the strategies—more freshmen, more transfer, and more completion—will be required in each of the regions. The relative importance of each of these strategies varies regionally, as described above, but the differences are not large and should not be overstated.

Table 5. Increases in access and improvements in graduation rates will be required to close the skills gap

	Number of additional bachelor's degrees awarded, 2015–16 through 2029–30 from CSU and UC		
	Los Angeles County	Inland Empire	San Joaquin Valley
Total increase in degrees above baseline	175,000	121,000	103,000
Increase due to additional freshmen admits	35,000	36,000	23,000
Increase due to additional transfer students	47,000	34,000	37,000
Increase due to higher graduation rates	93,000	51,000	43,000

SOURCE: Authors' projections based on the need-based scenario.
 NOTES: See Technical Appendix A for methods.

Ongoing Challenges and Promising Approaches

A focus on improving college degree attainment has spurred promising regional innovations, but significant obstacles still exist. To better understand the challenges facing colleges and universities in Los Angeles County, the Inland Empire, and the San Joaquin Valley as they seek to close the skills gap, we conducted structured interviews with 15 campus chancellors, presidents, and other academic leaders, as well as regional business leaders. The following section identifies regional challenges and highlights promising ongoing efforts at the state, regional, and campus levels.

Capacity Constraints

Capacity for higher education enrollment is often thought of in terms of physical space. Discussions among policymakers in Sacramento tend to center on the number of full-time-equivalent students and the amount of available dorm beds, classrooms, and lab space. But while physical capacity and maintenance are necessary, other factors, such as the availability of instructional resources and student services, as well as regional institutional capacity, also play an important role in supporting enrollment growth.

Challenge: Physical Capacity versus Funded Capacity.

In our interviews, most campus leaders acknowledged that facilities could be utilized more efficiently to maximize physical capacity, and many stated that they had room for additional physical capacity if sufficient funds were available. However, the majority of ongoing costs associated with higher enrollment comes from the faculty and staff needed to serve these students, so-called “funded capacity.” To continue improving student outcomes while also increasing eligibility and enrollment, campuses must hire new faculty, add sections and courses, and employ new advisers, tutors, and financial aid counselors. One-time funding can be used for capital improvements and deferred maintenance, which will undoubtedly help increase physical capacity. But such funding does not cover the ongoing costs needed to sustain enrollment growth. Moreover, current financial data systems do not adequately account for institutional

Private Colleges and Universities

Private colleges and universities play an important role in higher education in California—enrolling almost as many undergraduates as the University of California—and should be part of regional collaborations to improve college access and completion. Unfortunately, we are not able to develop regional projections that include private colleges due to the lack of available data on substate region of origin of these students. Using data from the Integrated Postsecondary Education Data System (IPEDS), we do know that private nonprofit four-year colleges have an especially large presence in Los Angeles County but operate at a relatively small scale in the Inland Empire and the San Joaquin Valley.

It is important to note that private nonprofit colleges are less likely to enroll students from California than the state’s public universities. In 2014–15, 62 percent of undergraduates at private nonprofit colleges in the state were from California, compared to 82 percent at UC and 94 percent at CSU. In each of the three regions, private nonprofit colleges, on average, enroll smaller shares of students from low-income and other underrepresented groups. For example, Latinos make up 42 percent of undergraduates at public universities in the three regions but only 24 percent of undergraduates at private nonprofit colleges.

Additional regional details:

- Los Angeles County is home to 35 private nonprofit colleges, which enroll about 78,000 undergraduates (compared to 161,000 at the region’s six public universities). Students are more likely to come from out of state compared to those at public universities in the region (43% versus 10%).
- The Inland Empire is home to four private nonprofit colleges, with a total undergraduate enrollment of about 15,000 students (compared to 38,000 at the region’s two public universities). Students are more likely to come from out of state compared to those at the public universities in the region (18% versus 3%).
- The San Joaquin Valley is home to three private nonprofit colleges, with a total undergraduate enrollment of about 8,000 students (compared to 45,000 at the region’s four public universities). Students are more likely to come from out of state compared to those at public universities in the region (14% versus 2%).

In contrast, private for-profit four-year colleges play a much smaller role, enrolling very few recent high school graduates in each of the regions.

costs due to the difficulty of tracking revenues and expenditures in higher education. For example, underprepared students and those from underrepresented backgrounds may need greater support and access to student services. Since student diversity varies across campuses and systems, it stands to reason that funded-capacity constraints may differ by campus even if physical capacity does not. Without accurate methods to track instructional costs and the return on investment of different student services, there will continue to be confusion surrounding campus capacity constraints in higher education (Cook, Jabbar, and Murphy 2017).

Challenge: Geographic Variation in Higher Education Opportunities. The geographic dispersion of college campuses affects the skills gap, since the regions that need to produce more college graduates are less likely to have a four-year campus nearby. The Inland Empire has nearly 4.2 million residents but only two public four-year institutions. Even as regional demand for bachelor's degrees increases at a steady rate, the lack of four-year college opportunities for qualified students from the region hinders generational economic progress: students must leave the region to pursue a bachelor's degree. Though the San Joaquin Valley has a similar number of residents as the Inland Empire and more four-year public universities, the geographic dispersion of campuses over such a large area creates similar challenges.¹⁴ Distance from students' place of residence plays an important role in determining their ability to attend college and what type of college they choose (Goodman, Hurwitz, and Smith 2015). For example, nationally, the majority (57.4%) of incoming freshmen attending a public four-year college in 2014–15 enrolled within 50 miles of their permanent home, and the median distance was only 18 miles (Eagan et al. 2014). Proximity is an especially important factor for CSU students, most of whom attend a campus in the same county as or an adjacent county to their home. Though many students are able to attend college in other areas of the state, students from working-class families and underserved communities are most affected by a lack of college options nearby (Ovink and Kalogrides 2015).

The geographic dispersion of colleges in the Inland Empire and the San Joaquin Valley affects the skills gap.

Promising Approach: Increased State Funding to Address Capacity. California has reinvested in public higher education—expanding enrollment and funding student services programs—since the severe cuts brought about by the Great Recession. Since 2010–11, state appropriations for higher education per full-time-equivalent student have increased by 16 percent, with CSU funding nearing prerecession levels and community college appropriations at record highs due to Proposition 98 funding increases (Cook 2016). Also, voters approved Proposition 51 in 2016, providing an additional \$2 billion to community colleges for capital projects. However, UC and CSU campus leaders across the three regions highlighted the need for additional bond funding for capital projects given that the funds from the last higher education bond, passed in 2006, have been depleted. Previously, the last higher education–specific bond to pass was in 1994. During the 2017–18 session, the legislature is currently seeking additional capital funding for UC and CSU through a higher education bond (Senate Bill 483 Glazer and Allen) that could provide an additional \$2 billion to the systems for capital funding to help with enrollment increases and deferred maintenance.¹⁵

Promising Approach: Focus on Four-Year Graduation.

Because of the substantial costs associated with hiring more faculty and staff, improving four-year graduation rates is another critical strategy to provide more institutional capacity for new transfer and freshmen students. For example, following a successful initiative that substantially improved graduation outcomes from 2009 to 2015 (described in more detail below), CSU has embarked on the Graduation Initiative 2025, which seeks to further increase systemwide four-year graduation rates to 40 percent and six-year graduation rates to 70 percent, while closing achievement gaps between racial/ethnic groups. In addition to helping students attain their academic goals more quickly, achieving these objectives would allow for sustained enrollment growth. Though the five- and six-year graduation rates at CSU are better than at similar colleges nationally, four-year graduation rates still lag behind—suggesting that more progress can be made. The University of California is also working to improve its four-year graduation rate. Though UC has an excellent six-year graduation rate (nearly 90%), there is room to improve its four-year graduation rate, which is slightly more than 60 percent.



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Efforts at the University of California and California State University to improve four-year graduation rates could provide more institutional capacity for new students.

Promising Approach: Satellite Campuses. Another effort to address capacity and geographic dispersion has been the development of “satellite campuses” or “off-campus centers.” Currently, CSU operates 17 undergraduate off-campus centers serving more than 4,000 state-funded students and many more “extension” students who pay the full cost of instruction (LAO 2017). These campuses tend to make use of existing buildings, are located within one or two hours of a main campus in relatively large population centers, and provide degree programs that reflect the business needs of the local communities, with some offering a wide range of academic options. For example, the CSU San Bernardino extension Palm Desert Campus in Coachella Valley (the third-largest off-campus center at CSU) offers 40 undergraduate majors and select graduate programs. Often, a satellite campus begins as a public-private partnership but can potentially evolve into a mostly independent campus as enrollment and capacity grow. The Palm Desert Campus occupies 55 acres, with space to grow onto another 120 acres, and has seen steady enrollment growth in an underserved area of the state. Conversations with multiple leaders suggest that incrementally developing satellite campuses might be a way to grow system capacity, serve regions with high demand for higher education but little access, and meet local business needs—without the significant costs and growing pains of opening a new campus from scratch.

The Role of California State University

California State University is the largest university system in the nation and produces the most bachelor’s degrees of any segment of higher education in the state (Johnson and Cuellar Mejia 2016). Over the past two decades, CSU has succeeded in improving its six-year graduation rate. In 2008, only about half of CSU freshmen graduated within six years, and students from historically

underrepresented groups had even lower graduation rates. Launched initially in 2009, the CSU graduation initiative sought to increase the overall graduation rate to 54 percent and increase the graduation rate of underrepresented minority students—African American, Latino, and Native American students—to 51 percent (CSU Office of the Chancellor).

Challenge: Closing Graduation Gaps. By 2015, CSU had succeeded in raising the systemwide graduation rate to 57 percent, and the graduation rate among underrepresented minority students rose to 50 percent. But little progress was made in closing graduation gaps between racial/ethnic groups. The extent of improvement also varied widely across campuses. CSU's new graduation initiative, launched in 2016, sets ambitious goals for graduation rates, aiming to increase four-year rates from 19 percent to 40 percent and six-year rates from 57 percent to 70 percent by 2025. A key part of this initiative is eliminating gaps in graduation rates between groups of students. If the system achieves these goals, it will meet the closing-the-gap completion target for CSU identified in this report (Table 2 and Table 3). Each campus has developed strategies to improve graduation rates, though implementing and funding these strategies will be an ongoing challenge.

Challenge: Impaction. Overcrowding at certain CSU campuses and in certain majors has a serious impact on the system's ability to increase bachelor's-degree production. In 2000, the CSU Board of Trustees created a systemwide enrollment management policy—referred to as impaction—that allows campuses to establish local admissions criteria that go beyond systemwide criteria for certain high-demand programs (e.g., nursing or engineering) or for certain groups of students (e.g., first-time freshmen or transfers). This policy has had far-reaching effects: CSU campuses turned away 30,000 eligible students in 2015–16 due to impaction. Normally, local CSU-eligible first-time freshmen and upper-division transfer students are guaranteed admission to a nearby CSU campus. However, if a specific major or program is “impacted,” the local guarantee is suspended, though local applicants still receive some degree of prioritization. Currently, out of 23 campuses, there are six where every major is impacted; another six have only two or fewer impacted majors.

CSU campuses determine the local admission areas for qualifying local applicants. Though these boundaries are meant to include the entire territory of the school district or community college with “a significant number of historical enrollments in the CSU campus of that region,” they can seem somewhat arbitrary, with different local admission areas applying to students in the same county.¹⁶ Additionally, unlike at the University of California, where applicants to an oversubscribed campus are referred to open campuses (recently UC Merced), CSU applicants who do not meet admissions criteria for their local campus but do meet systemwide eligibility requirements are not referred to a non-impacted campus. Consequently, this policy seems to create enrollment and capacity inefficiencies, as impacted campuses like CSU Fullerton and Long Beach are over-enrolled, whereas non-impacted campuses like Dominguez Hills and Bakersfield could accommodate greater enrollment.

Promising Approach: Campus Graduation Strategies. CSU's first graduation initiative generated numerous innovative strategies, as individual campuses were given the freedom to experiment with how best to improve outcomes for their students. Our interviews for this report and previous

Overcrowding at California State University has limited student enrollment.

PPIC research highlight key strategies that CSU campuses in the Inland Empire and Los Angeles County employed to improve graduation rates and time to degree (Jackson and Cook 2016). For example, CSU San Bernardino established Coyote First STEP (Student Transition Enhancement Program), an expanded summer bridge program that overlaps with the CSU Early Start program, which requires that students who need to take remedial coursework enroll the summer before their freshmen year to prepare for college-level courses. Coyote First STEP provides funding for students to live on campus for three to four weeks over the summer, enrolling them in remedial math and English coursework while also providing peer mentoring and workshops to engage students and their families. CSU San Bernardino believes the program has been particularly successful in helping first-generation students, who make up 80 percent of the campus's student population, and improving college persistence and completion rates.¹⁷ Long Beach State University has also had success identifying and eliminating so-called “bottleneck courses,” which can prolong students' time to degree. Long Beach State found that greater collaboration between the budgeting and academic planning departments, coupled with an institutional commitment to fully funding the course schedule and providing courses and sections based on student demand, nearly eliminated bottleneck courses within a few years.

The Role of Community Colleges

Transfer students from California's community colleges make up half of CSU enrollment and nearly one-third of UC enrollment. In fact, a large share of California's high school graduates enroll in the state's open-access community college system. California ranks fifth nationwide in the share of recent high school graduates who enroll in community college but ranks 47th in the share who begin at a four-year university (Jackson, Bohn, and Johnson 2016).

Challenge: Improving Transfer Rates. Unfortunately, community college completion and transfer rates have stagnated or even declined over the past decade. Less than half of students entering a community college intending to transfer eventually do so (Jackson, Cook, and Johnson 2016). This trend has not changed much over the past decade; in fact, completion rates were lower in 2015–16 than they were in 2010–11. The main barrier is the large share of community college students who are deemed underprepared for college and placed into remedial courses. In California, 80 percent of entering community college students enroll in at least one remedial course, and Latino, African American, and low-income students are overrepresented in those courses. Of students enrolled in a remedial course, only 24 percent transfer after six years (Cuellar Mejia, Rodriguez, and Johnson 2016). Regional community college outcomes mirror this trend. The large share of students in these regions that enroll in remedial courses multiple levels below transfer means that the overall transfer rate may be even lower. This is especially true in the San Joaquin Valley, which has high enrollment in community colleges compared to four-year colleges.

Promising Approach: Basic Skills Initiative. Policymakers, the California Community Colleges (CCC) Chancellor's Office, and individual campuses have all invested considerable resources to transform remedial education. The state has invested \$20 million per year since 2007–08 in its Basic Skills Initiative and additionally allocated one-time funding of \$90 million to the Community Colleges Basic Skills and Student Outcomes Transformation Program and \$10 million to the Basic Skills Partnership Pilot Program (Cuellar Mejia, Rodriguez, and Johnson 2016).¹⁸ This funding has largely gone toward improving and standardizing the basic-skills curriculum,

funding professional development, and supporting data collection and evaluation. This initiative has spurred many innovative approaches to redesign remedial course sequences and to create a more student-oriented curriculum. In our interviews, the program discussed most frequently was corequisite remediation. This approach allows students to enroll in transfer-level courses while concurrently taking the necessary support courses to build the skills they need to succeed (Belfield, Jenkins, and Lahr 2016). CSU will be implementing corequisite remediation at all of its campuses beginning in 2018–19. The Central Valley Higher Education Consortium (CVHEC), discussed in more detail below, has also begun an ambitious effort to encourage all of its regional colleges to adopt the corequisite remediation model.

Promising Approach: Associate Degrees for Transfer. Created in 2010, the Associate Degrees for Transfer (ADT) program has been an important step in creating clear transfer pathways for California’s community college students (Senate Bill 1440 Padilla). The program required community colleges to create two-year (60-unit) associate degrees that would be transferable to CSU campuses. The ADT requires completion of a minimum of 18 units in a major or area of emphasis, as determined by each community college, and an approved set of general education courses. Students who fulfill ADT requirements are given junior standing at CSU and priority admission to a similar CSU program (LAO 2015). Implementation of this program has been slow as it requires faculty and other college officials from both community colleges and CSU to agree on major requirements that will qualify for transfer, but the results are promising. As of 2016, nearly 2,000 ADTs have been created, and enrollment in the ADT program increased from about 700 in 2011–12 to more than 20,600 in 2014–15. Unfortunately, large-scale implementation has been limited to only a few colleges. Ten out of the 113 community colleges in California awarded a third of all ADTs, and two-thirds of ADT earners enrolled in only four CSU campuses (Campaign for College Opportunity 2016).¹⁹ But outcomes for students who earn these degrees are promising, and more transfer agreements between systems will be essential to modernizing the transfer pathway and accelerating the production of bachelor’s degrees.

Promising Approach: Guided Pathways. In the 2017–18 higher education budget proposal, Governor Brown requested \$150 million in one-time funds to develop the Guided Pathways initiative. The budget language also directs the CCC Chancellor’s Office to align this program, to the extent possible, with the grant-funded California Guided Pathways project, which is working with 20 pilot colleges.²⁰ Based on decades of research, Guided Pathways aims to transform community colleges’ curriculum, transfer agreements, student services, and administration using a more student-focused model (Bailey, Jaggars, and Jenkins 2015). This approach is predicated on the notion that colleges are poorly designed for students, particularly first-generation and low-income students. Guided Pathways is characterized by certain key elements, such as establishing detailed academic program maps with timelines for key milestones, allowing students to explore related academic programs under “meta-majors” rather than requiring them to commit to a single major early on, and using early warning systems to allow advisers to proactively engage students who may be struggling (Jenkins, Lahr, and Fink 2017). Eleven of the twenty pilot colleges are located in the three regions highlighted in this report, with four participating colleges in Los Angeles County, four in the San Joaquin Valley, and three in the Inland Empire. Research suggests that successful implementation could help close achievement gaps and significantly improve completion and transfer rates in these regions—outcomes that will be essential to closing the skills gap.

College Promise Programs

Increased state and local revenues, growing investment from the private and nonprofit sectors, and greater focus on college access and affordability have resulted in the proliferation of college promise programs. Though these programs can take many forms, for the most part they seek to increase college enrollment by offering future financial assistance to elementary and middle school students in a specific geographic area. Benefits might include a semester or two of free tuition, increased support services, and priority or guaranteed admission to local colleges, as long as students complete the necessary coursework and maintain satisfactory academic progress. California has 23 college promise programs, most of which focus on community colleges. Thirteen of these programs launched in 2016 and another four are slated to begin in 2017 (WestEd 2016). The most well known of these programs, the Long Beach College Promise, began in 2008 and provides a tuition-free year to students from Long Beach Unified School District who attend Long Beach City College, and guaranteed admission to Long Beach State University if they fulfill eligibility requirements. More research is necessary to determine the long-term effects of promise programs and specifically whether they lead to more college graduation.

Challenge: Inconsistent Standards and Potential Inequities. The current approach to college promise programs entails several risks. First, promise programs assure students that they will have access to future financial grant aid to attend college, an assurance that relies on the continued availability of such programs. Second, these programs vary widely in terms of the assistance they provide. Some programs offer a full year of tuition at a local community college, while others provide only one semester. The Long Beach College Promise offers priority enrollment to Long Beach State, a fully impacted university, while other promise programs do not provide priority enrollment to impacted CSU campuses. Third, though most promise programs offer tuition assistance for community college, two-thirds of community college students already do not pay tuition. Additionally, promise programs that focus on two-year colleges may discourage eligible students from attending a four-year college—thereby reducing their likelihood of earning a bachelor’s degree. Finally, the ad hoc nature of many of these programs has the potential to create equity issues if the location of students’ high school determines their grant aid and admissions priority at CSU campuses. In sum, the lack of clear standards and the localized nature of promise programs leave room for improvement.

College promise programs should focus regionally and incorporate four-year colleges more consistently.

Promising Approach: Regional Promise Programs. College promise programs represent a long-term investment in increasing college-going rates, which will undoubtedly be necessary in meeting the needs of California’s workforce. By motivating students early in their academic careers to prepare for college, these programs allow families to plan for an affordable college option, and they help create or contribute to a local college-going culture. However, focusing on regional—rather than local—promise programs and incorporating four-year colleges more consistently would help address some of the challenges described above. In the San Joaquin Valley, the Central Valley Promise began as a local program, including only Fresno Unified School District, Fresno City College, and Fresno State University. The program is now expanding to include multiple

K–12 districts and community colleges within the region and may further broaden its reach to include additional CSU campuses like Stanislaus and Bakersfield. Though this program is still in the initial stages of expansion, this approach has the potential to ensure college affordability and access for regional students in a more equitable way.

Policy Recommendations

Local and regional institutions working together can build on existing initiatives and help remove some of the obstacles students face as they move from high school to and through college. These obstacles deter many students from making key transitions in the higher education pipeline, including going from high school to college and from community college to a four-year university. Below we offer specific recommendations for an integrated regional approach to closing the skills gap.

Increase Capacity at Four-Year Universities

Improving four-year graduation rates—thereby allowing existing faculty and staff to serve more students—will be critical to sustaining college enrollment growth. Both California State University and the University of California have recently undertaken ambitious initiatives to boost four-year graduation rates, which would improve institutional capacity. Establishing satellite campuses is another important strategy to support greater enrollment capacity and offer higher education opportunities closer to where students live. This approach may also serve as a model for piloting new campuses without the significant upfront costs of developing a new campus from scratch. The Palm Desert Campus, an extension of CSU San Bernardino, is a useful example of a satellite campus that could grow into a self-sustaining university. Recognizing the potential of satellite campuses could alleviate enrollment pressures while also helping to meet local business demand for more highly educated workers.

Improve the Transfer Pathway through Regional Coordination

Any effort to close the skills gap will require streamlining the transfer pathway. Regional collaboration and integration of student success initiatives across systems will be essential to this effort. For example, the Guided Pathways initiative has real potential to increase transfer rates, but as community colleges begin to develop academic and career pathways, it will be important to coordinate with regional UC and CSU campuses as well as private nonprofit colleges. In addition, aligning Guided Pathways with the Associate Degrees for Transfer program will further help improve the efficiency of the transfer process. Though Guided Pathways is intended to help students navigate community college regardless of whether they intend to transfer, ensuring that ADTs are integrated into the newly established academic pathways would improve outcomes for both initiatives. Furthermore, expanding the Associate Degrees for Transfer program to create “meta-ADTs” would give students the option of completing a similar major if their first-choice major is not available. Achieving this level of alignment would be difficult, requiring significant collaboration among institutions and considerable faculty support. However, integrating successful programs and improving regional cooperation across higher education systems will be necessary to accelerate the production of bachelor’s degrees.

Develop Regional Promise Programs

We propose the creation of regional promise programs that include all school districts, community college districts, and four-year colleges in a specific region. In contrast to local programs, regional promise programs would be better positioned to target outreach toward all regional school districts, reducing place-based inequities. In addition, by leveraging regional resources and supplementing federal and state financial aid, such programs could help ensure affordability and access to students from underrepresented backgrounds.

These programs could also help establish regional referral pools, which will be critical to improve access to four-year colleges. Currently, CSU does not have a referral pool for students who are eligible but not admitted to their campus of choice. Regional referral pools would grant students priority registration to multiple nearby campuses and could be expanded to include satellite campuses and private nonprofit colleges. This would incentivize enrollment in a four-year college, as opposed to a community college, and could help increase enrollment in non-impacted CSU campuses like Dominguez Hills and Bakersfield. Participating students who enroll in a community college within a specified region would be given tuition assistance based on their asset and income level. Students who then complete the necessary transfer requirements would be given priority enrollment to a local CSU campus and included in the referral pool to ensure they have the best chance of securing a place at a CSU campus near their home.

Support Regional Data-Sharing and Evaluation Efforts

The lack of a statewide, longitudinal, student-level data system has not prevented regional data-sharing networks. In our interviews, campus leaders in each region noted that relatively new regional entities like the Central Valley Higher Education Consortium (CVHEC) in the San Joaquin Valley and Growing Inland Achievement (GIA) in the Inland Empire have funding and dedicated staff to improve regional coordination between education systems, higher education sectors, and employers. Many of these efforts are just beginning, and the process of sharing data for rigorous evaluation of programs and student outcomes has not yet begun, so it remains to be seen how effective these agreements will be. Nevertheless, the broad acceptance of the need for rigorous evaluation—particularly concerning equity issues—is a promising development. The state could also play a significant role in coordinating regional efforts to help achieve economies of scale, reduce redundancies and the number of vendors involved, and lay the foundation for a standardized data platform that would allow for future data sharing across regions.

Looking Forward

Most college students in California attend a campus relatively close to home. Accordingly, regional action involving a broad swath of stakeholders—school districts, community colleges, public universities, and private nonprofit colleges—is necessary to move the needle on college enrollment and graduation. This integrated regional approach holds the most promise for addressing key obstacles to student success and helping ensure that the state meets its growing demand for college-educated workers.

NOTES

¹ The Inland Empire includes Riverside and San Bernardino Counties. The San Joaquin Valley includes Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties. Along with the Bay Area, the three regions studied in this report are the most populated parts of the state. College enrollment and completion rates are much higher in the Bay Area than in our focus regions.

² See Technical Appendix B for more details.

³ These statistics are based on California Department of Education data on cohort graduation rates from entering cohorts in 2004–05 and 2010–11.

⁴ UC and CSU have different grade point requirements for student eligibility, as well as requirements for minimum scores on college entrance exams (the SAT and ACT).

⁵ See Technical Appendix B for more details.

⁶ Unemployment rates range from 7.1 percent in San Joaquin County to 10.2 percent in Merced County according to California Employment Development Department data for April 2017.

⁷ Increasing college enrollment and completion in the Inland Empire and the San Joaquin Valley could help spur more high-skilled job creation, but it could also lead to more out-migration of highly skilled workers who find employment in California's coastal regions.

⁸ The difference is not as pronounced in the San Joaquin Valley, home to a large Southeast Asian population.

⁹ Some—but not all—of these differences in college enrollment can be attributed to differences in high school preparation for college. For example, among high school graduates who have completed the a–g college-preparatory courses, Latinos are more likely to attend UC than whites and more likely to attend CSU than Asians. But the very low rates of African Americans attending UC or CSU persists even if we only consider enrollment patterns among a–g high school graduates.

¹⁰ See Technical Appendix A for more details of our methodology.

¹¹ Based on fall 2015 freshmen enrollees from California public high schools.

¹² In the case of the Inland Empire, it also reflects the geographic accessibility of CSU campuses that are in adjacent regions.

¹³ Statewide there are an average of 1.6 million residents per CSU campus. CSU campuses in Pomona, Fullerton, and San Marcos are all outside the Inland Empire but in relatively close proximity.

¹⁴ In contrast, without including private colleges, there are six public four-year colleges in the Bay Area alone.

¹⁵ Yet it remains difficult to accurately evaluate capital expenditure requests because the governor, as part of the 2013–14 budget deal, combined the system's capital and support budgets in order to give the systems greater budgetary flexibility in the face of limited state funding. Although this budgetary change has spurred innovation and created avenues for increased public-private partnerships in funding capital needs, it has also reduced legislative oversight, decreased transparency, created downside market risk, and added additional complexity.

¹⁶ For example, a student in San Diego County who graduates from a high school south of State Highway 56 is eligible to receive prioritization (additional eligibility points) with respect to his or her application to San Diego State, a school with all majors impacted. A similar student who graduates from a high school in the same county but located north of Highway 56 is not eligible to receive those points and is instead offered admission to CSU San Marcos.

¹⁷ Some research suggests that Early Start programs have not been effective systemwide (Kurlaender 2017). CSU San Bernardino's Coyote First STEP is an expanded summer bridge program and more intensive than typical Early Start programs.

¹⁸ The \$90 million for the Basic Skills and Student Outcomes Transformation program includes an initial \$60 million allotment combined with an additional \$30 million appropriated to the program in the 2016–17 budget.

¹⁹ Two of the ten colleges (Citrus and Long Beach City) are in Los Angeles County. None are in the Inland Empire or the San Joaquin Valley.

²⁰ The Guided Pathways model was developed at the Columbia University Community College Research Center and has become a national movement successfully implemented at community college systems in other states such as Washington, Tennessee, and New York.

REFERENCES

- Bailey, Thomas, Shanna Smith Jaggars, and Davis Jenkins. 2015. *What We Know about Guided Pathways*. Columbia University Teachers College, Community College Research Center.
- Belfield, Clive, Davis Jenkins, and Hana Lahr. 2016. *Is Corequisite Remediation Cost-Effective? Early Findings from Tennessee*. Columbia University Teachers College, Community College Research Center.
- California State Senate Bill 1440. 2010. "Student Transfer Achievement Reform Act."
- California State Senate Bill 483. 2017. "Higher Education Facilities Bond Act of 2018."
- CSU Office of the Chancellor. n.d. "Chancellor's Office Graduation Initiative 2025 Plan."
- Campaign for College Opportunity. 2016. *Keeping the Promise: Going the Distance on Transfer Reform*.
- Cook, Kevin. 2016. "Higher Education Funding in California." Just the Facts. Public Policy Institute of California.
- Cook, Kevin, Talib Jabbar, and Patrick Murphy. 2017. *Measuring Institutional Costs at California's Public Universities*. Public Policy Institute of California.
- Cuellar Mejia, Marisol, Olga Rodriguez, and Hans Johnson. 2016. *Preparing Students for Success in California's Community Colleges*. Public Policy Institute of California.
- Eagan, Kevin, Ellen Bara Stolzenberg, Joseph Ramirez, Melissa Aragon, Maria Ramirez Suchard, and Sylvia Hurtado. 2014. *The American Freshman: National Norms Fall 2014*. Higher Education Research Institute, UCLA.
- Goodman, Joshua, Michael Hurwitz, and Jonathan Smith. 2015. *College Access, Initial College Choice and Degree Completion*. National Bureau of Economic Research.
- Hillman, Nicholas, and Taylor Weichman. 2016. *Education Deserts: The Continued Significance of "Place" in the Twenty-First Century*. American Council on Education and Center for Policy Research and Strategy.
- Jackson, Jacob, Sarah Bohn, and Hans Johnson. 2016. "Expanding College Access." Public Policy Institute of California, Higher Education Center.
- Jackson, Jacob, and Kevin Cook. 2016. *Improving College Graduation Rates: A Closer Look at California State University*. Public Policy Institute of California.
- Jackson, Jacob, Kevin Cook, and Hans Johnson. 2016. "Improving College Completion." Public Policy Institute of California, Higher Education Center.
- Jenkins, Davis, Hana Lahr, and John Fink. 2017. *Implementing Guided Pathways: Early Insights from the AACC Pathways Colleges*. Columbia University Teachers College, Community College Research Center.
- Johnson, Hans. 2016. "Testimony: Closing California's Workforce Skills Gap." Public Policy Institute of California Blog, May 18.
- Johnson, Hans, and Marisol Cuellar Mejia. 2016. "California's Higher Education System." Public Policy Institute of California, Higher Education Center.
- Johnson, Hans, Marisol Cuellar Mejia, and Sarah Bohn. 2015. *Will California Run Out of College Graduates?* Public Policy Institute of California.
- Kurlaender, Michal. 2017. "Evaluating Remediation Reforms at the California State University." Policy Analysis for California Education seminar presentation, April 21.
- Legislative Analyst's Office (LAO). 2015. *Implementation Update: Reforming Transfer from CCC to CSU*. LAO, February 2.
- Legislative Analyst's Office (LAO). 2017. *Assessing UC and CSU Enrollment and Capacity*. LAO, January 19.
- Ovink, Sarah, and Demetra Kalogrides. 2015. "No Place Like Home? Familism and Latino/a-White Differences in College Pathways." *Social Science Research* 52: 219-35.
- WestEd. 2016. *The College Promise in California: A Collection of Program Profiles*.

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