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Higher Education as a Driver of Economic Mobility

SUMMARY

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

California has great wealth but also one of the highest poverty rates in the nation. The ability of Californians to move up the income ladder often depends on acquiring the education and skills needed for higher-paying jobs. But despite the state's increasingly knowledge-based economy, too few Californians are earning a college degree.

This report examines the importance of higher education in promoting economic mobility. We find:

- **A college degree confers multiple benefits**. The value of a college degree is the highest it has been in decades. College graduates have better labor market success than less-educated adults, including substantially higher wages and lower unemployment rates: the typical full-time worker with a bachelor's degree earned $80,000 in 2016, compared to $36,000 for those with only a high school diploma. College graduates are also less likely to need social services, more likely to own a home, and more likely to have jobs with good benefits.
- **Not all Californians have the same chance to experience these benefits.** Low-income, first-generation, Latino, and African American students—who make up most of the state's public high school students—are less likely to graduate high school, enroll in college, and graduate college than their peers. For instance, among young adults born in California, 60 percent of Asian Americans and 40 percent of whites have at least a bachelor's degree, compared to 21 percent of African Americans and 18 percent of Latinos.
- **California must build upon its recent progress**. The state and its educational institutions have invested heavily in a wide range of policies and programs that aim to help students make it into and through college. And California public universities have a relatively good track record with respect to economic mobility. But further action is needed in five critical areas: college preparation, financial aid, transfer to four-year universities, college access, and college graduation.

Every sector—from K–12 schools to public and private universities—has an important role to play in harnessing the power of higher education. Improving college access and completion so that more Californians, particularly historically underrepresented students, earn a college degree is necessary to fully realize the potential of higher education as an engine of economic mobility for all our children.

Introduction

Despite California's booming economy, the state has among the highest poverty rates and income inequality in the nation.[1] Upward economic mobility—the opportunity to move up the income ladder either in one's own lifetime or across generations—determines whether poverty and low income levels persist. For most people, gaining an education and thus improving one's chances in the job market is the key to becoming upwardly mobile. Historically, economic progress depended on dramatic increases, first in high school completion and then, in more recent generations, in college completion. In today's increasingly knowledge-based economy, broad-based increases in college completion are necessary.

The majority of Californians recognize the importance of a college education to succeed in today's economy, with low-income residents (63%) much more likely than higher-income residents (48%) to say that a college degree is very important (Baldassare et al. 2018).[2] Improving educational outcomes for young adults in California, especially those from economically disadvantaged backgrounds, is essential to respond to the changing labor market, generate upward economic mobility, and ensure a prosperous state.[3]

There is a strong relationship between parents' income levels and the incomes their children will have as adults, and between the educational attainment of parents and their children (Butler, Beach, and Winfree 2008; Hertz 2006). Most young adults in California whose parents are college educated and/or have higher incomes will also finish college and access the economic mobility ladder. However, a college education helps to level the playing field for those who are disadvantaged: upon graduation, low-income and first-generation college students have similar labor market outcomes relative to their peers (Chetty et al. 2017a; Forrest Cataldi, Bennett, and Chen 2018).[4]

California has long enjoyed strong economic and educational gains, but recent trends in educational attainment are not as encouraging. Today, young adults in California are only slightly more likely to have graduated from college than older adults. Indeed, compared to the 34 countries that are part of the Organisation for Economic Co-operation and Development (OECD), California ranks first in the share of older adults holding at least a bachelor's degree or equivalent, but only 22nd among younger adults (Johnson 2016).

This stagnation of generational progress plays a role in sluggish income growth, which together with rising income inequality has limited upward economic mobility (Katz and Krueger 2017).[5] In the last few decades, the percentage of Californians earning more than their parents has declined steadily, from 89 percent of those born in the 1940s to only 49 percent of those born in the 1980s (Chetty et al. 2017b; Levin 2018).[6]

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[1] According to the latest Census Supplemental Poverty Measure (SPM) estimates, which account for both social safety net benefits and the cost of living, California has the highest poverty rate in the nation, but statistically speaking it is indistinguishable from that of Florida and Louisiana. The Census Bureau's state SPM for 2015–2017 estimates that California's poverty rate is at 19 percent. California also has the highest child poverty rate in the nation when measured this way. In 2016 one in every five children in California (21%) lived in families who struggled to meet their basic needs (Bohn, Danielson, and Thorman 2018). In terms of income inequality, California ranks seventh highest among the 50 states based on the ratio of the top 1 percent to the bottom 99 percent of family income; in California, the top 1 percent makes 30.7 times more than the bottom 99 percent (Sommeiller and Price 2018).

[2] Across racial/ethnic groups, Latinos (69%) and Asian Americans (61%) are more likely than African Americans (49%) and whites (46%) to say a college degree is very important (Baldassare et al. 2018).

[3] Research shows that nationwide a greater percentage of adult children with college degrees exceeded their parents' income than those without a college degree across the entire income spectrum (Haskins, Holzer, and Lerman 2009). Without a college degree, children born in the lowest income quintile have a 45 percent chance of remaining in the bottom quintile as adults. With a college degree, children born in the bottom quintile have less than a 20 percent chance of staying in the bottom quintile of income distribution.

[4] Conditional on the type (selectivity) of the college they attend.

[5] Starting in 1980, incomes for the California median family have stagnated (Bohn 2018).

[6] This is based on comparing the earnings of adults at age 30 relative to what their parents earned at the same age.

In this report, we examine the importance of higher education—particularly bachelor's degrees—in promoting economic mobility.[7] First, we summarize the many benefits of a college degree. Second, we describe the challenges of fully realizing the potential of higher education as an engine of economic mobility. Finally, we consider the progress that has already been made and what else needs to be done to ensure upward mobility for all California children.

A College Degree Confers Multiple Benefits

Economic progress for countries, states, families, and individuals is closely tied to improvements in educational attainment (Barro and Lee 2015). Individuals with higher levels of education have higher wages (Card 1999), and they enjoy additional benefits that transcend wage gains. Society as a whole is also better off, thanks to lower unemployment and poverty rates, less demand for public assistance programs, lower incarceration rates, higher tax revenue, and greater civic engagement (Stiles, Hout, and Brady 2012; Trostel 2015; Ma, Pender, and Welch 2016). Places with more highly educated populations tend to have stronger economies and relatively high wages (Berger and Fisher 2013; Bauer, Schweitzer, and Shane 2006). Finally, whether California meets its workforce needs over the long term hinges on more students earning at least a bachelor's degree (Johnson, Bohn, and Cuellar Mejia 2017).

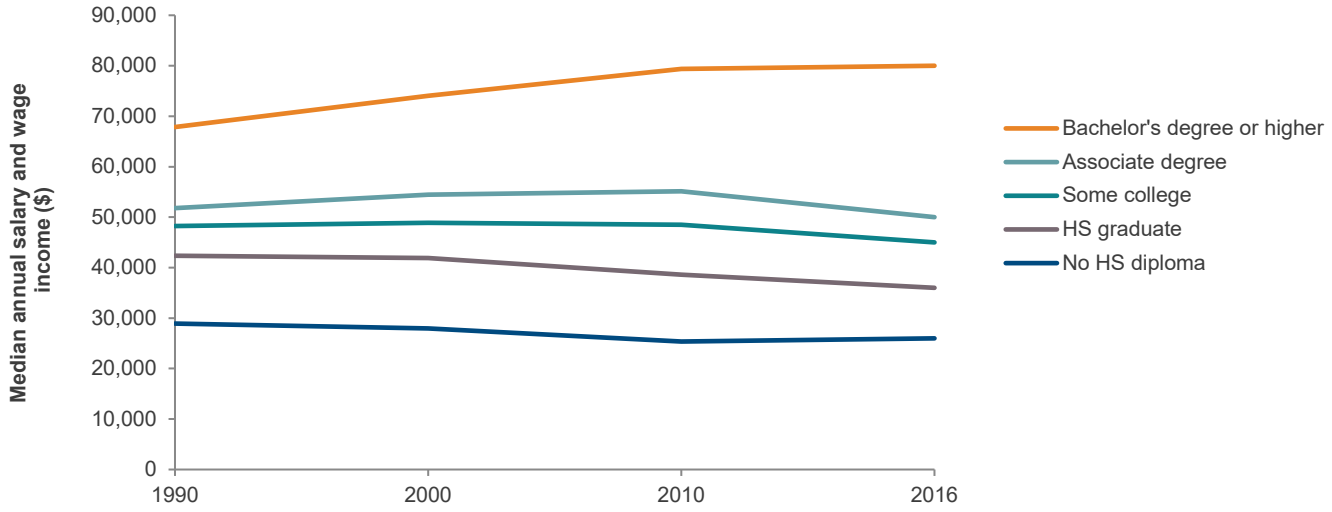
Wages Are Much Higher for College Graduates

In California, the typical full-time year-round worker with only a high school diploma earns $36,000, while the typical worker with at least a bachelor's degree earns $80,000 (Figure 1). Moreover, in the last few decades wages have increased more for those with a college or advanced degree than for those with lower levels of education. Between 1990 and 2016, and when adjusted for inflation, median earnings increased by 18 percent for workers with at least a bachelor's degree, while decreasing by 15 percent for those with only a high school diploma.

[7] We focus on bachelor's degrees for several reasons. First, labor market outcomes, including wages, are on average substantially better for workers with a bachelor's degree than those with sub-baccalaureate credentials. Second, the number of career education certificates awarded is small compared to the number of bachelor's degrees. Third, data on labor market outcomes for certificates are scarce. PPIC has published research identifying high-value certificates in health programs (Bohn, McConville, and Gibson 2016), but large datasets such as the American Community Survey do not include certificates as an educational attainment category.

FIGURE 1

Wages have grown for highly educated workers



SOURCE: Authors' calculations based on the 1990 and 2000 decennial censuses and 2010 and 2016 American Community Survey one-year estimates.

NOTE: Wage and salary income for full-time year-round workers ages 25 to 64. Dollars are adjusted for inflation using CPI-U-RS.

Consequently, the wage premium associated with a college degree—the ratio of average annual earnings for workers with at least a bachelor's degree compared to those with no more than a high school diploma—has increased consistently over time. Since 2000, the college wage premium among full-time year-round workers has risen by 15 percentage points. After controlling for changes in the age and demographic composition of the workforce, workers with at least a bachelor's degree earned 73 percent more than similar workers who held only a high school diploma in 2016; they earned 58 percent more in 2000 (Figure 2).[8] The wage premium has grown even as the share of college graduates in the workforce has increased, indicating that the demand for college graduates has outpaced the growing supply.[9]

Graduate education confers additional gains above and beyond a bachelor's degree—the wage premium for those with only a bachelor's degree is 62 percent, compared with 91 percent among those who attained an advanced degree. In fact, the wage premium for graduate education rose more rapidly than that for bachelor's degrees—19 percentage points versus 12 percentage points between 2000 and 2016.

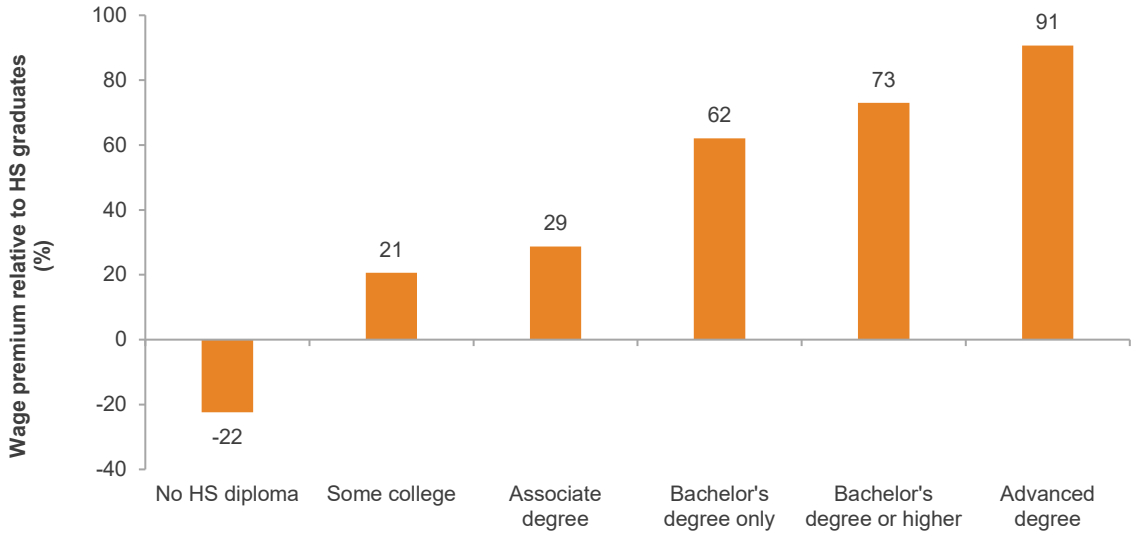
While postsecondary career education or "vocational" degrees and certificates also confer wage gains in many fields, the amount varies tremendously and tends to fall short of those earning at least a bachelor's degree (Stevens, Kurlaender, and Grosz 2015; Bohn, McConville, and Gibson 2016). On average, the wage premium for workers with an associate degree is 29 percent higher than those with only a high school diploma.

[8] Calculating wage premiums for full-time year-round workers ignores differences in employment patterns by level of education. Because adults with higher levels of education are more likely to be employed and to work full time if they are employed, the wage premium is larger when those not working full time are included.

[9] The wage premium in California is not only slightly higher than in the rest of the nation but also has grown more over time (see Table A2 in the technical appendix). The best research suggests that the college wage premium, as estimated in our standard wage models, is an accurate measure of the causal effect of college. See the Technical Appendix for more information.

FIGURE 2

Higher levels of educational attainment confer higher wage premiums



SOURCE: Authors' calculations based on 2016 American Community Survey one-year estimates.

NOTE: Full-time year-round workers ages 25 to 64. The wage premium is the percent difference in wages between college graduates (with at least a bachelor's degree) and high school graduates. These estimates are regression-adjusted for age, race/ethnicity, gender, and citizenship. See the Technical Appendix for details. "Bachelor's degree or higher" is a combination of the adjacent bars.

It is important to keep in mind that there is considerable variation in earnings within each level of educational attainment (see Table A3 in the technical appendix). In fact, over the past three decades, the gap in wages between the lowest-paid college graduates (bottom 25 percent) and the highest-paid college graduates (upper 25 percent) has widened substantially, while the pay range for high school graduates has remained constant (Cuellar Mejia and Johnson 2014). The reasons behind this widening gap are numerous, including graduates' major, occupation, industry of employment, and location. The differences across majors are especially large, with engineers seeing the highest returns, followed by computer science and business, while education majors have the lowest wage premium.[10] But even workers with the least financially rewarding majors earn substantially more than the typical worker with only a high school diploma (see Figure A1 in the technical appendix). And overall, college graduates who are in the bottom 25 percent of earners compared to other college graduates still have higher wages than the typical worker with only a high school diploma (see Table A4 in the technical appendix).

The Benefits of a College Degree Extend beyond Wage Gains

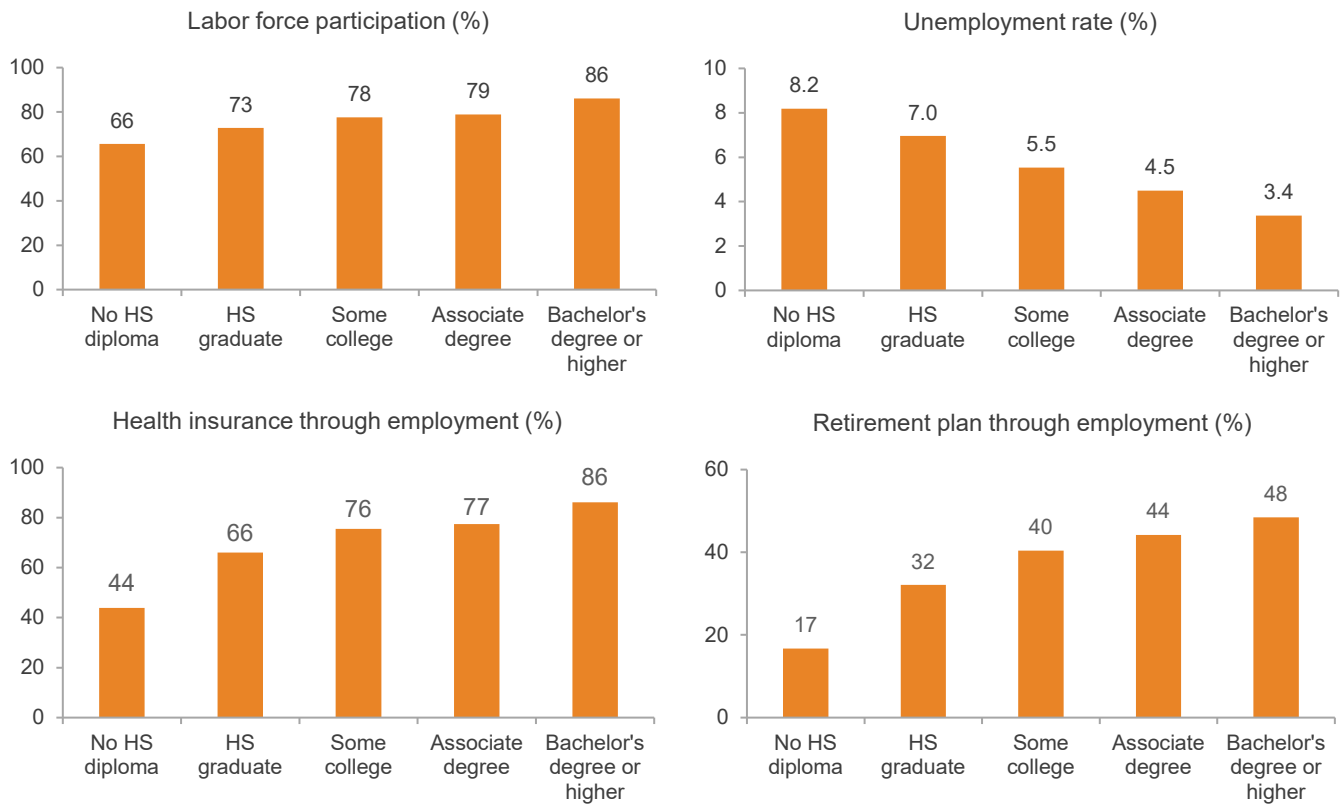
College-educated workers are more likely to participate in the labor force, less likely to be unemployed, and more likely to have jobs that provide additional non-wage compensation, such as paid vacation, employer-provided health insurance, and retirement plans (Figure 3). Among working-age adults (ages 25–64), 27 percent of those with only a high school diploma do not participate in the labor force, compared with 14 percent of those with at least a bachelor's degree. Differences in unemployment rates between highly educated and less educated workers are also wide. The unemployment rate for workers with only a high school education is over twice as high (7.0%) as for those with at least a bachelor's degree (3.4%).

[10] In California, workers with engineering degrees earn a median annual wage of $112,300, while the median wage for workers with degrees in education administration and teaching is $64,300. For workers with only a high school diploma, the median wage is $44,000. Nationally, results are similar (Altonji, Blom, and Meghir 2012).

Not only are college graduates more likely to be employed, they are also more likely to hold more-stable jobs: 75 percent of workers with at least a bachelor's degree are employed full time, compared with 58 percent of workers with only a high school diploma. Over the course of their working lives, adults with at least a bachelor's degree will spend nearly seven more years employed, compared with those with only a high school diploma (Stiles, Hout, and Brady 2012).

FIGURE 3

The labor market benefits of a college degree extend beyond higher wages



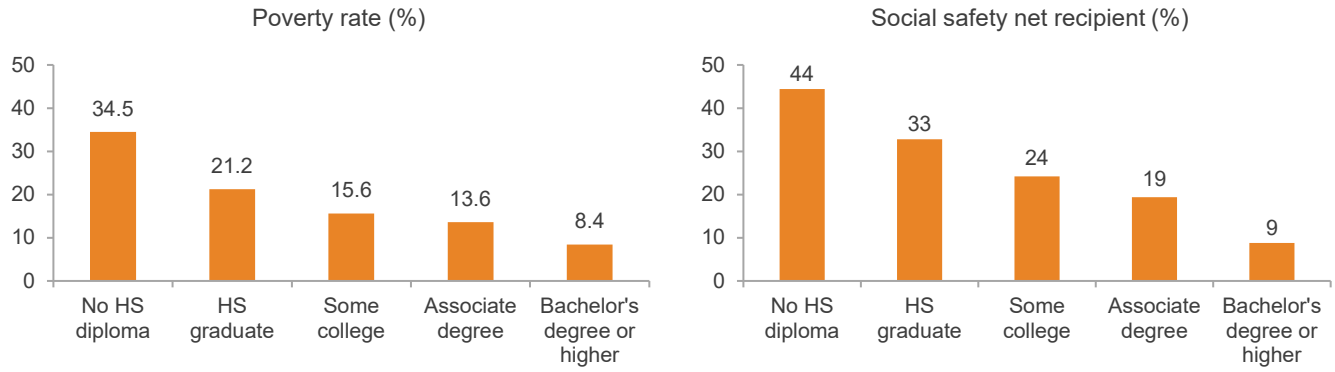
SOURCE: Authors' calculations for California based on 2016 ACS one-year estimates, 2017 Current Population Survey.

NOTE: These figures provide useful clues concerning the relationship between educational attainment and important indicators of individual well-being, but it is worth noting that they do not reliably determine causation or measure the exact size of the effects. They are best interpreted as providing suggestive evidence of the powerful role that higher education plays. Also, there are numerous ways that the observed beneficial effects of college attainment are interdependent. Please see the Technical Appendix for a precise definition of each variable and for data sources.

A college degree is also associated with other economic measures of well-being. For example, college graduates are more likely to own a house and less likely to be in poverty or to need resources from assistance programs (Figure 4). Higher education may bring nonfinancial benefits to graduates as well. College graduates report being in better health, are more likely to be married and have long-lasting marriages, have lower mortality rates, and are more likely to be civically engaged (Trostel 2015; Ma, Pender, and Welch 2016).

FIGURE 4

Higher educational attainment is associated with lower poverty and social safety net assistance



SOURCE: Authors' calculations for California based on 2016 ACS one-year estimates, and estimates from the 2016 California Poverty Measure.

NOTE: Only adults ages 25–64 are included, but individuals' poverty status and social safety net participation are determined based on the status of their family, which may comprise other individuals outside of this age range and with alternate education levels. Poverty status and social safety net participation are based on California Poverty Measure estimates. In this chart, "social safety net" refers only to CalWORKs, General Assistance, CalFresh, Supplemental Security Income, and federal housing subsidies.

Equity Gaps Are a Significant Challenge

Although a college degree has a big payoff, most adults in California (66%) do not have a bachelor's or graduate degree.[11] Of particular concern are the populations that traditionally have the lowest educational attainment levels—low-income, first-generation, Latino, and African American students, who enroll in and graduate from college at significantly lower rates than their peers. These groups face significant barriers with respect to college readiness, access to college, and college completion.

Low-income, first-generation, Latino, and African American students also make up the vast majority of California's high school students. In 2017–18, 60 percent of California's public high school students were identified by the California Department of Education as socioeconomically disadvantaged, meaning they were eligible for free or reduced-price school meals or their parents did not graduate from high school. Over 70 percent of Latino and African American students were socioeconomically disadvantaged, compared to 32 percent of Asian American and white students. Altogether, three in four public high school students in California are either socioeconomically disadvantaged or part of a demographic group (Latino, African American, American Indian, or Pacific Islander) that is underrepresented among college graduates.[12]

More Students Are Eligible for College But Equity Gaps Remain

Statewide improvements in high school graduation rates and college preparation are good news, but large equity gaps persist. California's high school graduation rate increased from 75 percent in the 2009–10 school year to 84 percent in 2015–16. Much of this increase has come from rising graduation rates among underrepresented student groups: rates for socioeconomically disadvantaged, Latino, and African American students each increased by 12 percentage points, while graduation rates for English Learners rose 16 percentage points (Gao and Lopes 2017).

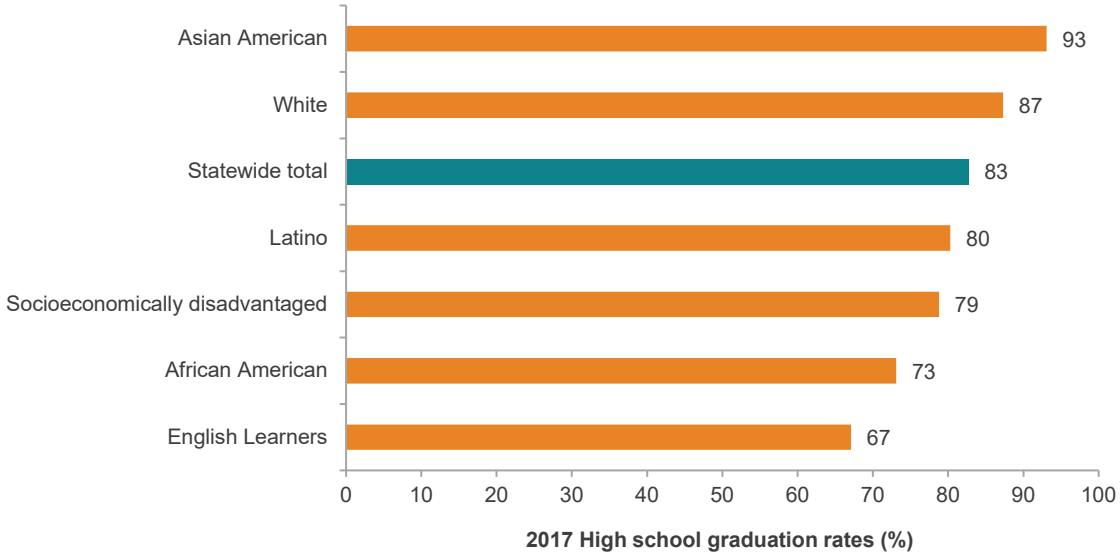
[11] The percentage is similar for the United States as a whole (68%). This calculation uses data from the 2017 American Community Survey, one-year estimates, for the population ages 25 and over.

[12] Based on data compiled from the California Department of Education using DataQuest.

However, graduation rates for these underrepresented student groups still lagged behind those of Asian American and white students in 2016–17 (Figure 5).[13]

FIGURE 5

High school graduation rates for underrepresented student populations continue to lag behind



SOURCE: California Department of Education (CDE).

NOTE: Based on cohort graduation rates. "Socioeconomically disadvantaged" is defined by CDE as students whose parents did not graduate from high school or who are eligible for free or reduced-price lunches.

High school graduates are increasingly likely to complete college preparatory courses, but equity gaps remain large in this area as well. The proportion of high school graduates completing the college preparatory curriculum required by the University of California and California State University increased from 34 percent of public high school graduates in 2007–08 to 47 percent in 2016–17. Gains have been especially strong for Latinos: the share of Latinos completing the requirements rose from 22 percent to 39 percent, leading to a decrease in the white–Latino performance gap (from 17 percentage points to 13 percentage points). Among African Americans, the share increased from 23 percent to 35 percent, but the white–African American performance gap remains unchanged. Finally, among socioeconomically disadvantaged students, the share of those completing college preparatory courses increased from 28 percent to 39 percent. But despite these increases, less than half of California's high school graduates met the requirements, and achievement gaps persist.

College Access and Graduation Rates Remain Unequal

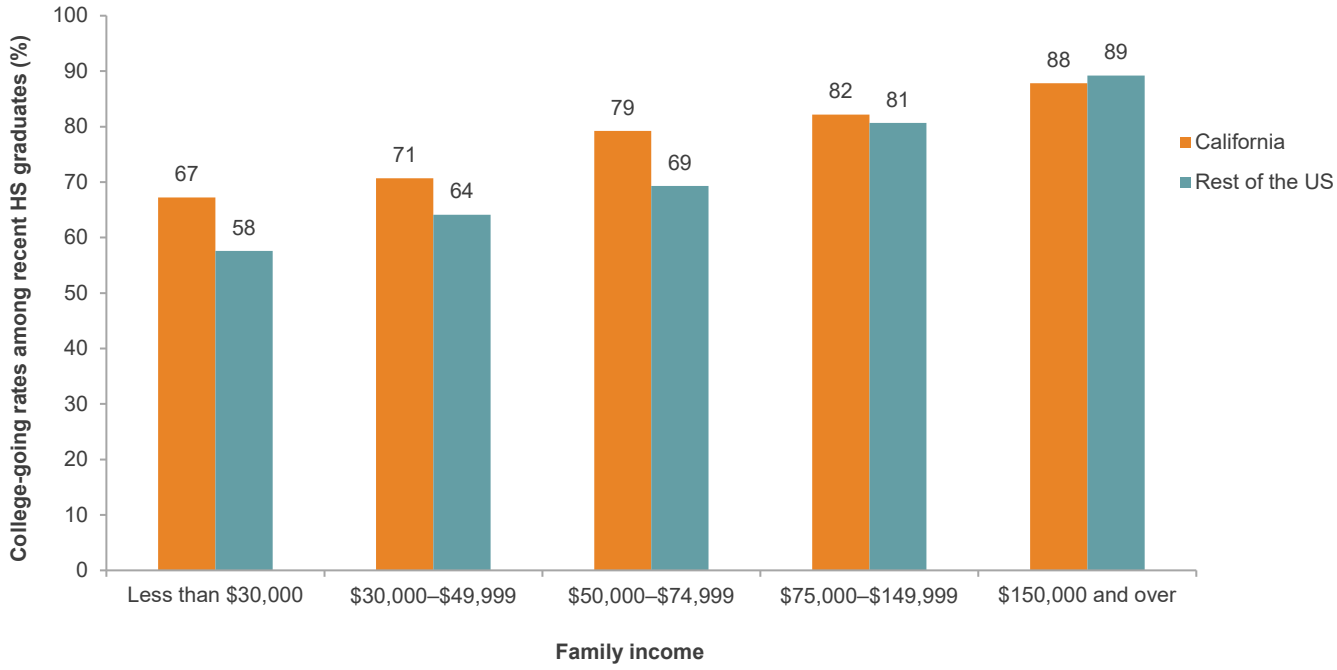
Although the last few decades have seen significant gains in college access, college-going rates remain unequal across demographic and socioeconomic groups. For example, a large majority of California students from low-income families enroll in college in the fall after completing high school, but college-going rates are higher for students from high-income families. In California, 67 percent of high school graduates from the lowest-income families enroll in college, compared with almost 90 percent of graduates from the highest-income families (Figure 6). However, California has a better track record of college access for low-income students than the rest of the

[13] The California Department of Education implemented significant changes for calculating 2017 high school graduation rates; therefore these rates should not be compared to those of prior years (California Department of Education 2018).

nation, where 58 percent of high school graduates from the lowest-income families enroll in college. College-going rates for Latino (72%) and African American (71%) high school graduates also lag behind those of white (79%) and Asian American (90%) students.[14]

FIGURE 6

Access to college is higher for students from high-income families



SOURCE: Authors' calculations based on October Current Population Survey 2007-2016.

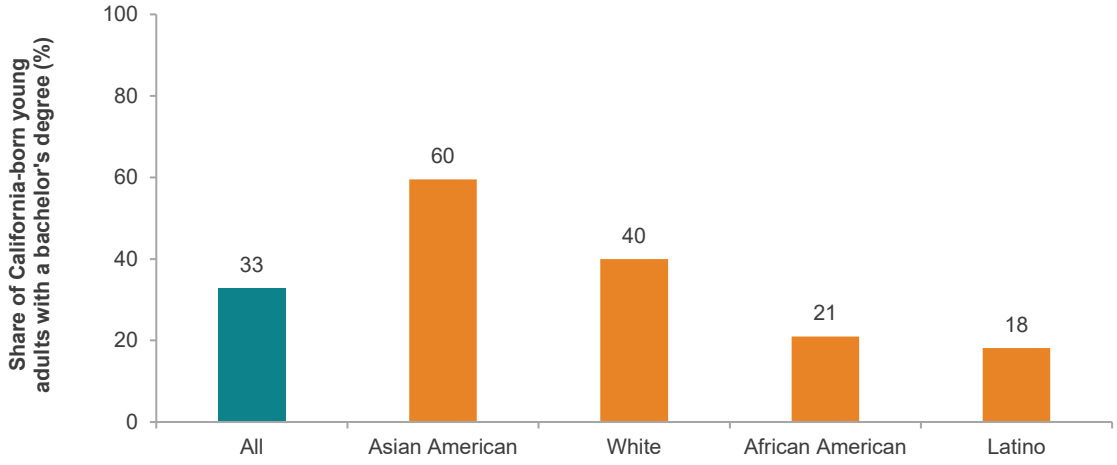
NOTE: Restricted to recent high school graduates living with family members. Results are similar if we include students living independently. College-going rates of recent high school graduates do not capture students who wait more than a year after receiving a high school diploma to continue their education, a pattern more common among lower-income students.

Furthermore, too many students who enter college never earn a degree. Low-income, first-generation, Latino, and African American college students are even less likely to complete college than other students. For example, among young adults who were born in California, 60 percent of Asian Americans and 40 percent of whites have at least a bachelor's degree, compared to 21 percent of African Americans and 18 percent of Latinos (Figure 7). And in every higher education sector in California (UC, CSU, community colleges, and private colleges), Latino, African American, low-income, and first-generation students are less likely to graduate than other students.

[14] Based on authors' calculations of October Current Population Survey 2007–2016. Restricted to recent high school graduates. For each ethnic group, college-going rates were at least several percentage points higher in California than in the rest of the United States.

FIGURE 7

Young adults from underrepresented groups are less likely to have a bachelor's degree



SOURCE: Authors' calculations based on 2016 American Community Survey data.

NOTE: Restricted to adults age 25–34 born in California and living anywhere in the United States.

Importantly, access to four-year universities is also sharply divided by family income. In both California and nationwide, recent high school graduates from low-income families are much more likely to attend community colleges than are students from high-income families (see Figure A2 in the technical appendix). Unfortunately, students who begin their college career at a community college are much less likely to earn a bachelor's degree than those who start at a four-year college.

Equity Gaps Differ across Higher Education Sectors

Equity gaps in college access and graduation rates partly reflect differences in students' academic preparation and the institutions they attend. Creating more broad-based access to college—especially to four-year colleges and universities—for underrepresented students will involve all of California's education sectors.

While students attend a variety of higher education institutions in California, most enroll in public colleges and universities. California Community Colleges (CCC) and CSU enroll the most students and have higher shares of low-income and first-generation students than UC or private nonprofit colleges (Figure 8). Private nonprofit colleges enroll almost as many undergraduates as UC but have lower shares of low-income and first-generation students than the other sectors. Notably, the shares of low-income and first-generation students at CSU and UC have increased substantially over the past decade.[15]

First-time students at community colleges and CSU reflect the racial/ethnic diversity of California's high school graduates, with Latinos making up the largest racial/ethnic group in both systems. At UC, Asian Americans are the largest racial/ethnic group (30% of first-time freshmen) and are overrepresented compared to the demographic composition of high school graduates. At private nonprofit colleges, whites are the largest racial/ethnic group (40% of first-time freshmen) and overrepresented relative to California's high school graduates.

[15] At CSU, the share of first-time freshmen from low-income families was 47 percent in fall 2016, compared with 31 percent a decade ago. In fall 2016, 35 percent of first-time freshman at UC were from low-income families, and 40 percent were first-generation students—up from 29 and 37 percent, respectively, a decade ago. UC defines first generation as those from families whose parents did not earn a college degree. Compared to similarly selective institutions nationwide, UC campuses far exceed their peers in enrolling low-income and first-generation students (University of California Office of the President 2017; University of California n.d.; Whistle and Hiler 2018).

FIGURE 8

Higher education sectors vary greatly in their shares of underrepresented student groups

SOURCE: Authors' calculations using systemwide data for the community colleges, CSU, and UC; and IPEDS data (2016–17) for private nonprofit institutions.

NOTE: We use Pell Grant recipients as a proxy for low-income students, except at California community colleges, where we include students who receive any form of grant aid. "First-generation" is defined as the first generation to earn a degree. For the community colleges, we use 2016–17 data for all students. In the first panel, for UC and CSU, we use the fall 2016 first-time freshman cohort (47,500 and 60,200 students, respectively). For private nonprofit institutions, we use full-time, first-time degree- or certificate-seeking students (28,000 students). The share of first-generation students at private institutions is based on data from the federal scorecard. The "private nonprofit" group includes 78 reporting colleges. We only include four-year universities with cohort sizes greater than 150 students. The "other" racial/ethnic group includes multiracial students, students of unknown racial/ethnic background, and international students.

Where students begin their college careers makes a difference in their graduation outcomes. Among community college students who have earned at least 6 units and attempted any math or English course in the first three years, less than half (48%) go on to transfer or obtain a degree or certificate within six years. The rates for African American and Latino students are even lower: 37 and 42 percent, respectively. Although the vast majority of students who do transfer to UC and CSU go on to earn bachelor's degrees, students who start at a community college are less likely to earn a bachelor's degree than those who start at a four-year university.[16]

When we examine graduation rates at four-year institutions, we find that low-income students tend to have lower graduation rates than their peers—but graduation rates differ substantially across sectors as well (Figure 9).

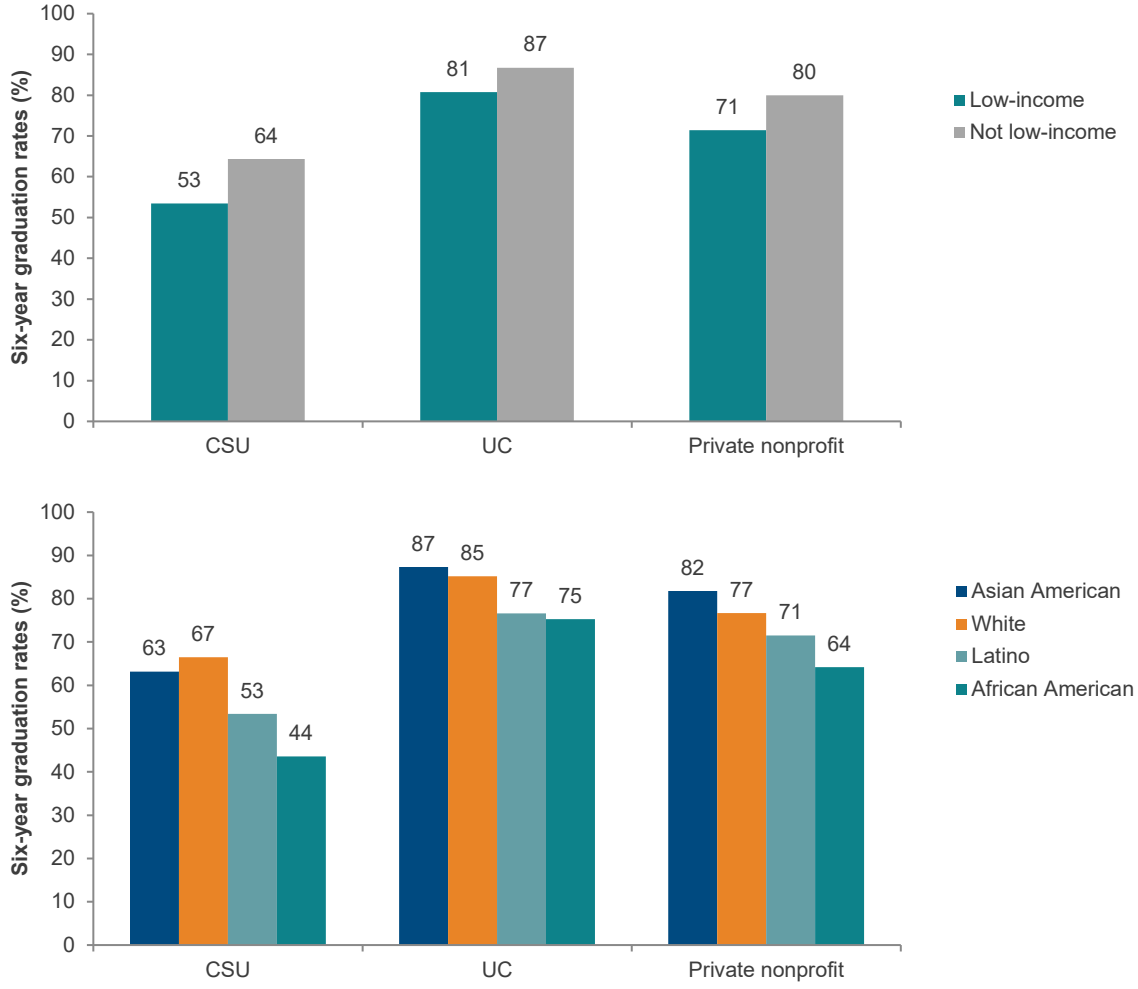
[16] This is based on the percentage of degree-, certificate- and/or transfer-seeking students starting first time in 2011–12 tracked for six years, through 2016–17, who completed a degree or certificate or transferred. Data drawn from the 2018 Student Success Scorecard.

UC has the highest graduation rates, followed by private nonprofit colleges and CSU. It should be noted that over the past two decades, CSU has experienced strong increases in graduation rates. In 1995, less than 40 percent of CSU freshmen graduated within six years, compared to about 60 percent for the latest cohort.

Equity gaps are larger at CSU than at UC and private nonprofit colleges. The gap between the six-year graduation rates of low-income students and their peers is 11 percentage points at CSU (53% versus 64%), compared to 9 percentage points at private nonprofits (71% versus 80%) and 6 percentage points at UC (87% versus 81%). We see similar patterns for graduation rates among racial/ethnic groups. For example, the gap between six-year graduation rates for African Americans and whites is 23 percentage points at CSU, 13 percentage points at private nonprofits, and 10 percentage points at UC. Although CSU still faces large equity gaps, the system has seen increases in graduation rates for all groups in recent years, and some graduation gaps have narrowed.

FIGURE 9

Graduation gaps for low-income students and underrepresented ethnic groups vary across four-year institutions



SOURCE: Authors' calculations using IPEDS data.

NOTE: We use Pell Grant recipients as a proxy for low-income students. Pell enrollment corresponds to the share of Pell Grant recipients in the total cohort. IPEDS data are based on 2010 entering cohort of full-time, first-time degree-seeking undergraduates. The "private nonprofit" group includes 41 colleges (25,000 students). We only include four-year colleges with cohort sizes greater than 150 students. Private for-profit colleges (not shown) enroll relatively few full-time first-time students (7,600 students at the nine colleges meeting our criteria); private for-profits have high shares of students from underrepresented groups, and graduation rates are lower than at other sectors.

What More Needs to Be Done?

California's higher education systems have implemented numerous policy and program changes in the last several years that will likely lead to increases in college completion for our diverse young-adult population. The state has supported many of those actions; for example, by providing funding for enrollment increases and student success programs as well as supporting financial aid, which has been and will remain a critical tool in addressing affordability for low-income students. Below, we discuss progress made to date and consider further actions to improve college completion and enhance long-term mobility.

California Has Made Considerable Progress

Both UC and CSU have made progress in increasing access, improving graduation rates, and expediting graduation while undertaking serious efforts to narrow equity gaps. UC's academic preparation and outreach programs—which reached first-generation and low-income students in more than 1,100 K–12 public schools and all 113 California community colleges in 2015–16—have been important tools in reaching out to this population. With the goal of reducing graduation gaps, UC launched the FirstGen campaign in 2017 to connect first-generation students to faculty and staff mentors as well as to campus resources that can help support them throughout their educational journey.

CSU's Graduation Initiative 2025, launched in January 2016, calls for reducing time-to-degree and increasing four-year and six-year graduation rates. Graduation rates for freshmen and transfer students are at all-time highs and are on the right path to meet the 2025 targets. In addition, first-time freshmen are on track to earn their degrees an average of one term earlier than prior to the initiative (Ruble 2017). Graduation rates have improved for every group, including low-income students, Latinos, and African Americans, and the latest data for 2017–18 show a narrowing of achievement gaps (California State University 2018). Partly because of additional funding from the state, CSU has been able to hire more faculty and advisors and to invest in student and academic support programs.

California's community college system has established ambitious goals in its Vision for Success to boost transfers to the state's public universities and reduce achievement gaps. Among other goals, the plan calls for increasing the number of California community college students transferring annually to a UC or CSU campus by 35 percent, cutting achievement gaps by 40 percent within five years, and fully closing those achievement gaps within ten years. Remedial education reform, implementation of the Guided Pathways model, and a new funding formula that rewards equity and success have the potential to make the educational pathway to a college degree more efficient and effective for young adults who start in community colleges.[17] Because these reforms are fairly new—or still to be implemented—we have yet to see large-scale systemwide results. But if these efforts are successful, improvements in the share of students who transfer from community colleges could be significant.

Finally, while the state has fewer policy levers with private nonprofit colleges, the sector is large and plays an important role in the state's higher education landscape. Notably, many private nonprofits (including 40 members of the Association of Independent California Colleges and Universities) have adopted policies to improve transfer pathways by participating in the Associate Degree for Transfer program, which guarantees students will be able to finish their bachelor's degree within two years of transferring from a community college.

Across all sectors of higher education, financial aid has had a big role in increasing opportunities for low-income, first-generation, and underrepresented students. California's state grant program (Cal Grants) is among the most

[17] For more on developmental education reforms at California's community colleges, see Cuellar Mejia, Rodriguez and Johnson (2016) and Cuellar Mejia, Rodriguez, and Johnson (2018)

generous in the nation and is appropriately focused on aid to low-income students. The state provided about $4.63 billion in financial aid during 2015–16, $2 billion of which was in the form of Cal Grants.[18] Students from families with the lowest incomes usually get the largest grant aid packages and therefore often pay no tuition at CSU, UC, and the community colleges.[19] Compared to their peers in the rest of the country, California students are less likely to take on debt, and when they do the amounts are lower than in the rest of the country. California's colleges have the third-lowest share of freshmen with loans in the nation—only 31 percent took out loans in 2013, compared to 47 percent of freshmen in the rest of the country.[20]

Further Action Is Needed

Every sector, from K–12 schools to public and private universities, has an important role to play to ensure more low-income, first-generation, and underrepresented students have the same opportunity to achieve upward economic mobility through higher education. To further support students along the pathway to and through college, the state and its higher education institutions should take action in these five areas:

- **College preparation**. It is important that students and families have clear information about UC and CSU admission requirements—including specific high school courses required—and financial aid as early as middle school. At high schools, counselors must have accurate information, and course schedules should allow students to complete the necessary requirements. Some school districts, including Los Angeles and San Diego, have started to require high school students to complete the UC and CSU college preparatory courses in order to earn a diploma. Such approaches are likely to increase college preparation but could come at the cost of lower high school graduation rates (Betts et al. 2016). Requiring high school students to opt out of college preparatory courses, rather than opting in, has led to encouraging improvements. Promise programs that provide early and actionable information about college entrance requirements and financial aid opportunities to middle school students and their parents can also improve college readiness.
- **Financial aid**. California and its public colleges and universities have done a good job of providing grants that cover the cost of tuition for low-income and even some middle-income students, but other costs—especially housing—are increasing and make college inaccessible for some students. Future proposals to reform California's financial aid programs must ensure access and affordability for low-income students and properly incentivize enrollment at colleges and universities that maximize students' likelihood of success.
- **Transfers**. Because the vast majority of low-income and underrepresented students in California who go to college begin their journey at community colleges, and because transfer rates are relatively low, improving transfer rates from community college to four-year colleges, including private nonprofits, could have a large impact on economic mobility. As noted earlier, remediation reform (to be fully implemented in fall 2019 under AB 705), Guided Pathways, and the new goals within the community college system are all steps in the right direction. Ensuring effective implementation of these and other programs—including any mid-course corrections that may be necessary—will require rigorous monitoring and evaluation efforts.
- **Access**. Colleges should consider systematically including students' economic background (i.e., family income and whether students are the first in their family to attend college) as one of the criteria used in determining admissions. Giving a higher priority to students' economic background could further broaden access for low-income and underrepresented students. Expanding institutional capacity would also lead to improvements in access. Qualified students are being turned away from UC and CSU—or redirected to a

[18] Award amounts vary by type of college: for 2016–17, Cal Grants could be as high as $12,240 at UC, $5,472 at CSU, and $9,084 at private colleges.
[19] These students also see reduced costs at private institutions, though grants and scholarships may not cover all of their tuition. Tuition is fully covered for 57 percent of UC undergraduates and 61 percent of CSU undergraduates. For community college students, the California College Promise Grant (formerly the BOG Fee Waiver) provides full tuition for low-income students.
[20] However, housing and other costs remain a problem for students. At the federal level, year-round Pell Grants, which were reinstated in the 2017–18 academic year, allow low-income students to receive Pell Grants throughout the entire year, including during summer sessions, and hold the potential to help students accelerate their time to degree completion and reduce students' costs.

campus that is difficult for them to attend—due to capacity limitations. Finding room for the growing numbers of college-ready high school graduates and transfer students will require expanded capacity at UC, CSU, and private nonprofit colleges. Securing funding for these increases remains an ongoing challenge.

- **Student success**. Completion rates of low-income and underrepresented college students lag behind those of their peers. The challenge is especially apparent at CSU, which has relatively high shares of low-income and first-generation students. CSU's graduation initiative has led to many promising campus-based efforts to improve graduation rates and close equity gaps. These programs should be rigorously evaluated, and the approaches that work best should be duplicated across the system.

With new leadership in the state comes an opportunity to reimagine the best ways of improving higher education in California. For all students to enjoy the benefits of a rapidly growing and increasingly sophisticated economy, the state must improve college access and completion among the many students from disadvantaged and historically underrepresented groups.

Gathering the right information—and using it effectively—is key. To better identify equity gaps and evaluate programs to improve student outcomes, California should establish an integrated data system that can track students from K–12 schools to college and into the workforce. In addition, given the importance of students' transition points—from high school to college, from community college to a four-year institution—greater coordination across sectors could help ensure students are making it to the next step in the pathway to college. By fully realizing the potential of higher education as an engine of economic mobility, California will ensure a brighter future for our children and the state as a whole.

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