

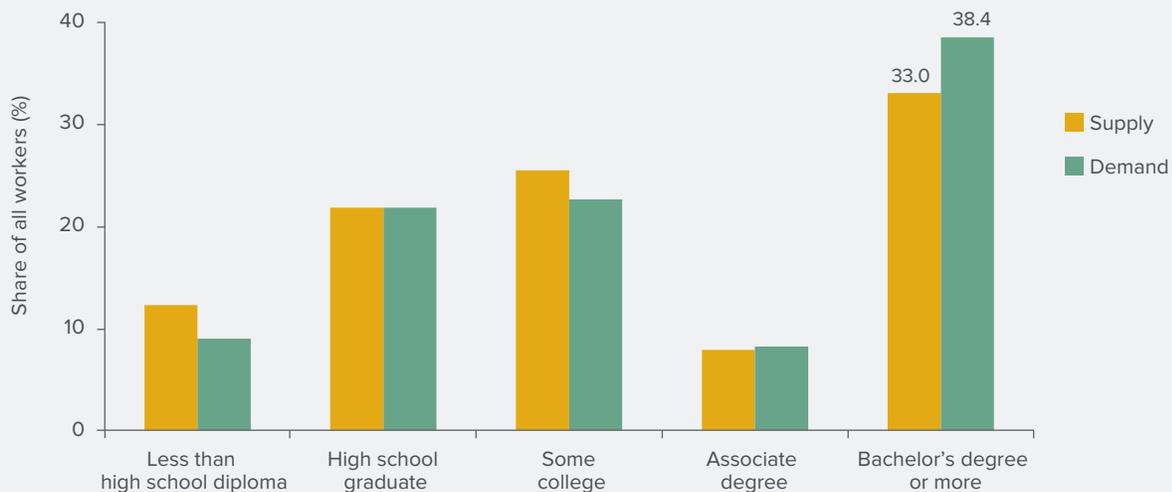
## California faces a long-term shortage of college-educated workers

A skilled workforce is key to a thriving California economy. Unfortunately, California's higher education system is not keeping up with the economy's changing needs. If current trends continue, California will face a large skills gap by 2030—it will be 1.1 million workers with bachelor's degrees short of economic demand.

Failing to keep up with the demand for skilled workers could curtail economic growth, limit economic mobility, and increase inequality. It could result in a less productive economy, lower incomes and tax revenue, and greater dependence on the social safety net. Over time, if California's workforce does not have the skills and training that employers need, firms may close, relocate, or operate at lower levels of productivity.

Closing the gap will require increases in the number of degrees awarded by every higher education sector in the state, including private nonprofit and public universities. New investments will be needed to meet those goals. Measuring progress and identifying programs and policies that improve student success, especially among underrepresented groups, should be key components of those investments. The good news is that changes made today can put California on a better trajectory. But educational progress takes time, so it is important to act now.

### DEMAND FOR COLLEGE-EDUCATED WORKERS WILL OUTSTRIP SUPPLY BY 2030



SOURCE: Johnson, Cuellar Mejia, and Bohn, *Will California Run Out of College Graduates?* (PPIC, 2015).

## California's economy needs and rewards degree holders

Currently, one-third of jobs in California require at least a bachelor's degree. Another third require some training beyond high school. The widening wage gap between highly educated workers and those with high school diplomas indicates that demand is growing.

- College graduates make up a large and growing share of the workforce.**

The share of working-age adults (18 to 64) with bachelor's degrees has increased from 22 percent in 1990 to 25 percent in 2000 to 29 percent in 2015. However, if current trends continue, by 2030 only 33 percent of California's working-age adults will have bachelor's degrees, while an estimated 38.4 percent of jobs—across the entire spectrum of occupations—will require a bachelor's degree or more.

- **The demand for skilled workers is increasing in the vast majority of occupations.**

Demand for highly educated workers is rising as the economy becomes more dependent on a skilled workforce. The share of college-educated workers is growing not only in occupations that have traditionally required high levels of education, such as computer science and health care, but also in occupations that have had smaller shares of college graduates, such as management in the hospitality industry.

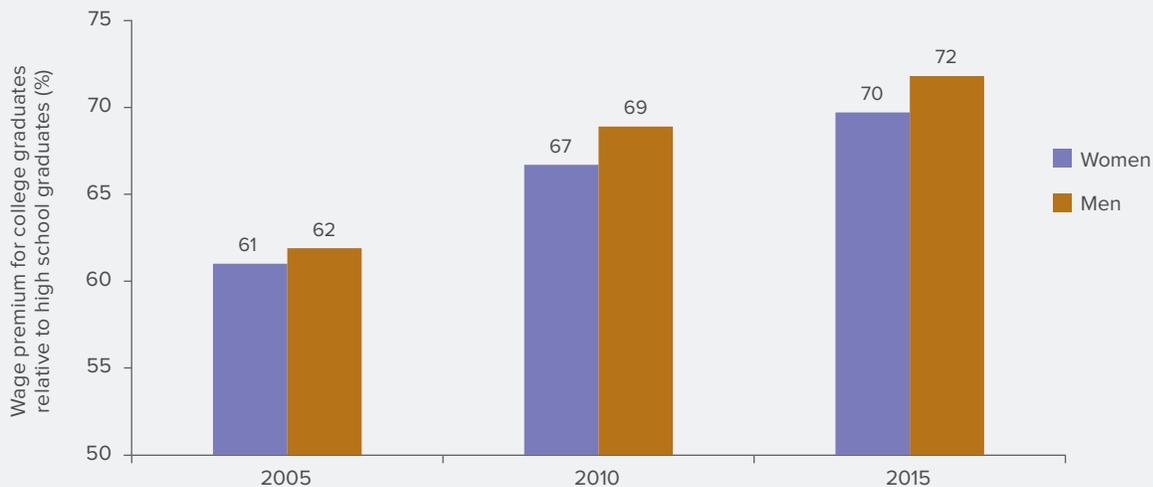
- **Educated workers earn substantially more in California ...**

Workers in all industries and demographic groups earn successively more with higher levels of education. In 2015, workers with a bachelor’s degree earned about 70 percent more than otherwise similar workers with only a high school diploma. The growth of this wage differential over time is evidence of a growing demand for higher levels of education, rather than a trend toward an overeducated workforce.

- **... though fields of study and employment matter.**

Wages for college graduates with bachelor’s degrees vary tremendously. For example, California workers with engineering degrees earn a median annual wage of \$111,000, while the median wage for workers with degrees in education administration and teaching is \$63,000. But even this lower amount is substantially higher than the \$42,500 median annual wage for those with only a high school diploma.

### HIGHER EDUCATION YIELDS HIGHER WAGES



SOURCE: Authors’ calculations based on wage regressions using American Community Survey data for 2005, 2010, and 2015.

NOTES: The chart shows the difference in wages for full-time, year-round workers ages 25 to 64 with at least a bachelor’s degree versus those with a high school diploma. Wage regressions control for age, gender, race/ethnicity, marital status, and citizenship.

## Educational attainment is not on track to meet future workforce needs

The share of college graduates in California’s workforce needs to grow to about 38 percent by 2030 to meet economic demand, if the economy is to operate optimally. This is significantly above and beyond the educational attainment of today’s workforce—and the state is not on track to meet future demand.

- **Retiring baby boomers are reducing the number of workers with bachelor’s degrees.**

Today, adults ages 60 to 64 constitute the best-educated segment of California’s labor force: more than 40 percent have at least a bachelor’s degree. The retirement of these highly educated workers is a major factor in the slow growth of working adults with at least a bachelor’s degree.

- **Groups with lower educational levels are a growing share of the state’s population.**

Educational attainment levels have historically been low among Latinos—who now make up California’s largest group of young adults. For example, among adults 25 and older, only 12 percent of Latinos have at least a bachelor’s degree, compared to 24 percent of African Americans, 42 percent of whites, and 51 percent of Asians. Educational attainment levels have been rising among Latinos but not fast enough to meet future demand.

- **The skills gap would be wider if it were not for migration.**  
The share of college graduates moving to California from other countries has increased significantly since 1980. Asia has replaced Latin America as the leading source of new immigrants, and immigrants from Asia tend to be highly educated: about 60 percent of working-age Asian adults (ages 25–64) arrive in California with college degrees. California also gains college graduates through migration from other states. Were it not for highly educated migrants, the skills gap would be even larger.
- **The state needs more California-born college graduates.**  
Future entrants to the labor market are increasingly likely to be California natives. Currently, California ranks near the bottom of all states (47th) in the share of recent high school graduates who enroll in four-year colleges or universities. The best approach to closing the skills gap will be to concentrate on improving the educational attainment of state residents.
- **To close the gap, public and private colleges need to award more bachelor’s degrees.**  
PPIC estimates that the University of California (UC) and California State University (CSU) together would need to produce an additional 730,000 bachelor’s degrees (with two-thirds of that increase coming from CSU) and private colleges would need to produce an additional 340,000 to fully close the degree gap by 2030. To reach these targets, the state and its higher education institutions should consider broadening UC and CSU eligibility for recent high school graduates, increase transfers from community colleges, and continue efforts to improve graduation rates.

## Looking ahead

To close the future skills gap, California must make deliberate choices and take action today.

**Align state education goals—and funding—with workforce needs.** California needs to establish a new set of goals that can help it close the skills gap. Although many have called for new strategies for educating California’s future workforce, the state has not adopted broad and widely accepted targets since it released the Master Plan for Higher Education in 1960. Workforce demand has changed substantially since then and will continue to evolve. UC and CSU have recently submitted reports to the legislature that identify how they could close their share of the skills gap through increased eligibility, transfer, and completion.

**Expand access to the state’s four-year colleges and universities.** The Master Plan’s eligibility framework for UC and CSU is outdated—over the past 50 years, there have been dramatic increases in college readiness and in the importance of education for workforce success. The state and its public universities should gradually expand eligibility for admittance. The state’s soon-to-be-released eligibility study will provide an opportunity to establish new goals for access to UC and CSU.

**Improve completion rates at both two- and four-year institutions.** A large share of California’s high school graduates attend college, but too few obtain four-year degrees. Even small improvements in transfer rates to four-year institutions and in college completion could substantially reduce the skills gap and improve educational outcomes among low-income and underrepresented students. The California Community Colleges recently established ambitious new goals to increase the number of transfers, and CSU has plans to substantially improve graduation rates.

**Provide students with information on the earnings potential of career pathways.** Completing college training without the promise of a well-paying career does little to improve economic outcomes or reduce the skills gap. Students need information and guidance to make important choices during their school years. The California Community Colleges have taken a big step in the right direction by providing easily accessible information on the labor market outcomes (and success rates) from different colleges and programs in the system.

**Focus on increasing college readiness and improving college placement among K–12 students.** Improving student achievement in high school and earlier—especially among low-income and disadvantaged students—can help lay the groundwork for success in college. This is a primary goal of the recently adopted Common Core curriculum in K–12 schools. Currently, the majority of students entering community colleges are placed in remedial English and/or math courses. Many of these students should be placed in college-level courses. New placement policies—which are being implemented at many colleges—and new types of remedial courses could help improve student success.

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