



# Opportunity Imbalance:

## Race, Gender, and California's Education-to-Employment Pipeline

While California's economy rapidly adds higher-paying jobs,<sup>1</sup> millions of Californians fail to qualify for these opportunities because they lack the required credential or degree. With lagging college completion rates, too few Californians can benefit from the state's projected economic growth, and many employers look out of state and overseas for the right talent. A looming deficit of **more than 2 million workers with degrees or credentials by 2025 stands in the way of California meeting its economic needs.**<sup>2</sup> Identifying inequities in the education-to-employment pipeline is critical to effectively closing California's degree and credential gap, and making sure that the ideal of the California dream is accessible to all.

This brief presents the educational and employment outlooks for California's population, followed by factsheets for each of California's largest racial/ethnic groups, including (ordered by population size):

- » **Latino**<sup>3</sup>
- » **Black**
- » **White**
- » **Native American**
- » **Asian**<sup>4</sup>
- » **Pacific Islander**

We examine the most current data at three key points in the pipeline—high school, postsecondary education, and workforce—to unearth where trends and challenges are consistent across racial/ethnic groups in California and where they are distinct. Within each population, we also show how patterns hold up across gender, as well as across regions.

### KEY FINDINGS

**Latinos** in California earn the lowest median wages of all racial/ethnic groups, but they also show the largest improvements in high school completion and college enrollment.

**Black** Californians experience the greatest educational gender disparities—Black women have much stronger educational outcomes than Black men.

**Native Americans** in California suffer from the lowest workforce participation rate.

#### **Consistent across all racial/ethnic groups:**

- » High school graduation rates are improving steadily, but college completion rates are not following suit.
- » Women fare better than men in educational outcomes.
- » Conversely, women in the workforce earn less than men, often because they are employed in lower-paying occupations.
- » Rural regions fall behind urban ones in both education and economic outcomes.

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**California Competes: Higher Education for a Strong Economy** develops nonpartisan and financially pragmatic recommendations for improved policies and practices in California's higher education system. Since 2010, California Competes' research, policy briefs, and analyses have identified and honed in on the challenges of California's higher education system and the actions policymakers must take to address them. For more information, please visit [www.californiacompetes.org](http://www.californiacompetes.org).



HIGH SCHOOL

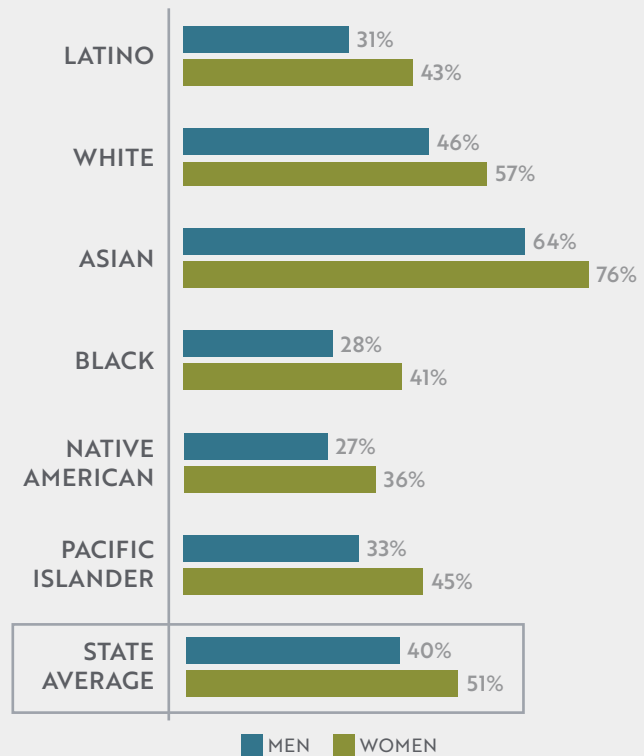
POSTSECONDARY EDUCATION

WORKFORCE

A growing number of high school students are positioning themselves for future success by **graduating high school on time**. California's statewide high school graduation rate improved from 77% in 2010 to 84% in 2016. While high school graduation rates improved for students of all races over that period, Black and Native American students still graduate from high school at the lowest rates. Across all groups, high school graduation rates for women are higher than those for men.

Completing high school is an important step to accessing economic opportunity, but it is also critical in this economy to graduate academically prepared for college. Unfortunately, our state still has a major leak at this point in the pipeline; eligibility rates among high school graduates for the state's publicly funded four-year institutions—the University of California (UC) and the California State University (CSU)—are improving, but not nearly as quickly as the state needs. Across California's high school graduates, **only 40% of men and 51% of women in 2016 completed the necessary credits required for attending the state's public four-year institutions.**<sup>5</sup> These rates are even lower for Latino, Black, Native American, and Pacific Islander students (Figure 1), as well as students in the rural regions of the state that often do not offer all of the A-G courses required for UC/CSU eligibility.<sup>6</sup> Again, women in every racial/ethnic group have higher UC and CSU eligibility rates compared to men.

Fig 1. UC/CSU Eligibility Rates for California High School Graduates, 2016



Source: California Competes' calculations of California Department of Education data for 2015-16



HIGH SCHOOL

POSTSECONDARY EDUCATION

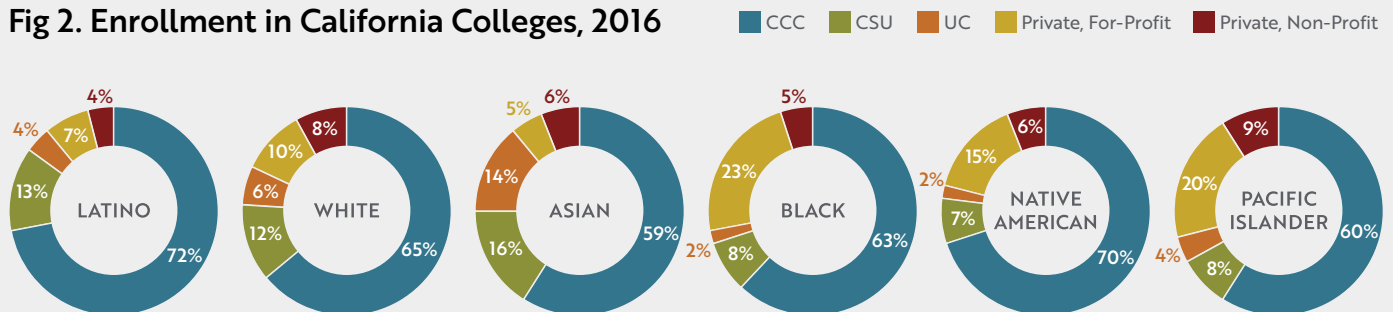
WORKFORCE

Community colleges are a popular choice for Californians.

Given its size and open access, it is not surprising that the California Community Colleges enroll the majority of college students overall in the state, as well as within each racial/ethnic group in this brief (Figure 2).

Where variability exists is in enrollment in the other segments in California—UC, CSU, and private institutions. Black, Native American, and Pacific Islander college students, particularly women, are overrepresented at private for-profit institutions, which have historically lower completion and often job placement rates than other segments. Black, Native American, and Pacific Islander students are also underrepresented at UC and CSU.

Fig 2. Enrollment in California Colleges, 2016



Source: California Competes' calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

**State improvements in high school completion and college enrollment are not resulting in matched improvements in college completion.** Just over half of California's college students complete their associate's degree in three years or bachelor's degree in six years (Figure 3), and this rate is lower still for Black, Latino, Native American, and Pacific Islander populations, and for men compared to women (see factsheets for detail).<sup>7</sup> Addressing the college completion challenge is critical as Californians without a college degree are increasingly shut out of occupations with high projected growth, such as software engineers and registered nurses.

**Comparing educational attainment levels across age groups shows a mix of progress and stagnation** (Figure 4). Postsecondary degree attainment rates are lowest for Latino adults but are on the rise. Degree attainment for Asian adults

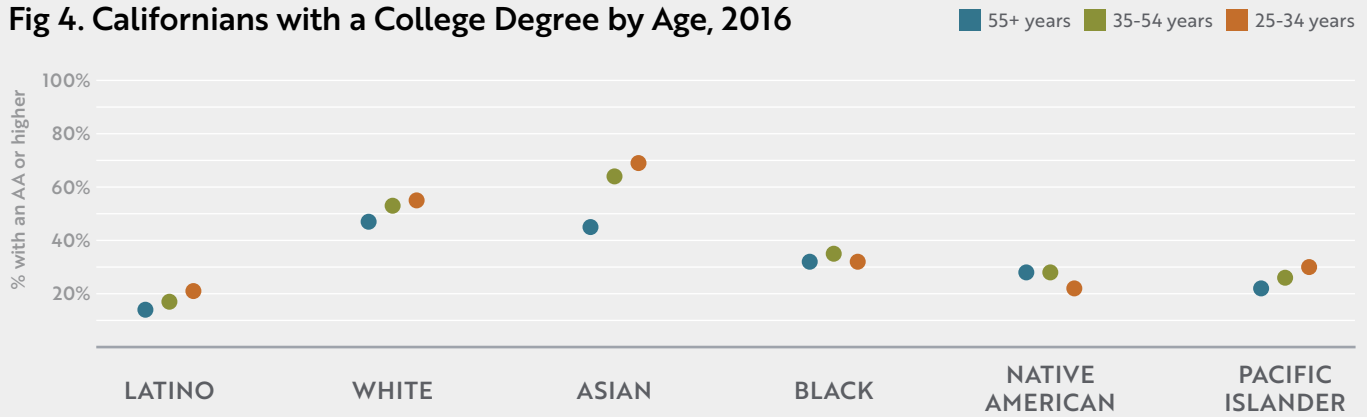
**Fig 3. Completion Rates for California College Students, 2016**



Source: California Competes' calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

is also growing quickly, but Black and Native American adults have not benefited from generational improvement in this area. Lack of progress for these racial/ethnic groups make it clear that time alone will not take the place of intentional, concerted statewide supports to improve postsecondary access and completion for all.

**Fig 4. Californians with a College Degree by Age, 2016**



Source: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data



HIGH SCHOOL

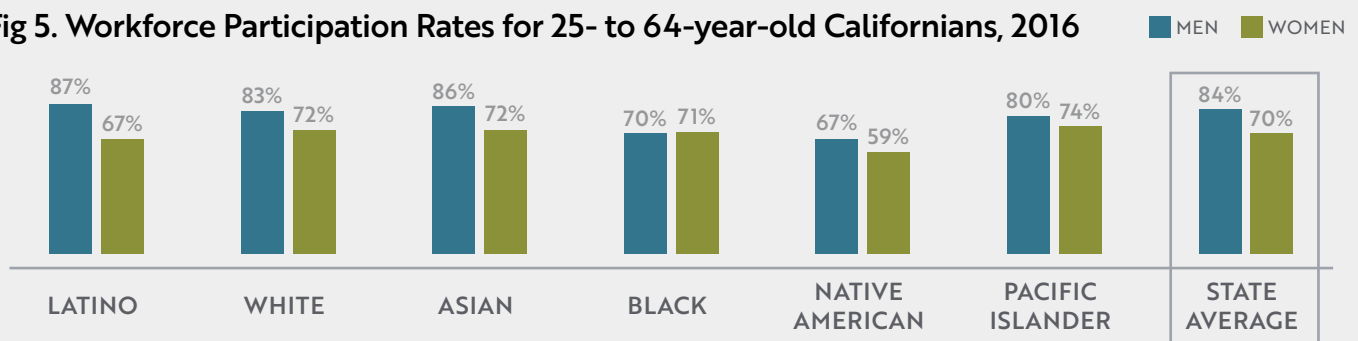
POSTSECONDARY EDUCATION

WORKFORCE

**The gender gap in workforce participation**—the percentage of adults who are either employed or looking for employment—**moves in the opposite direction as does education.** Despite having higher educational attainment, women have lower workforce participation rates than men (Figure 5). The only

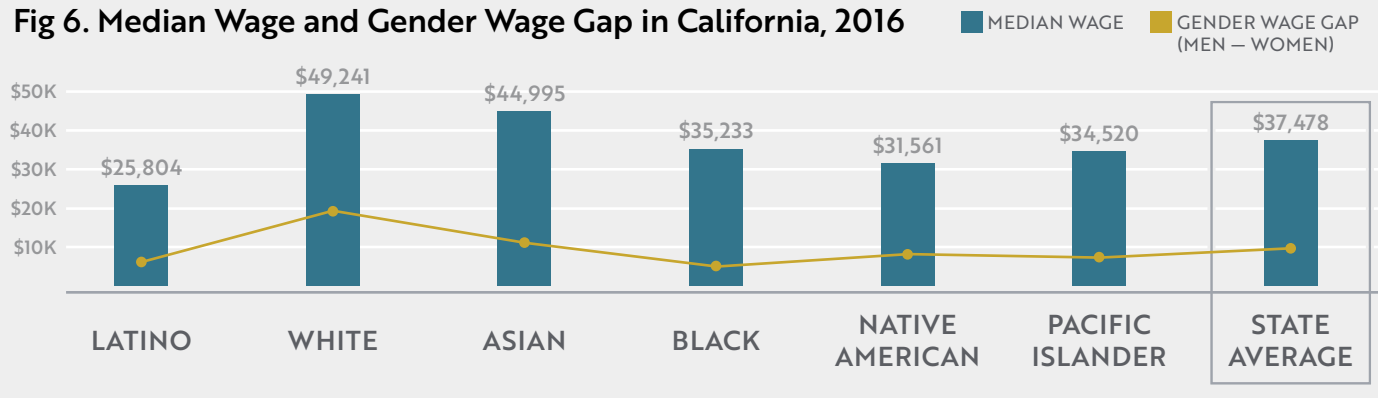
exception is in the Black workforce, where men and women have similar participation rates. Low participation rates can be a symptom of issues like disability or incarceration that disproportionately keep members of some racial/ethnic groups from seeking employment.<sup>8</sup>

**Fig 5. Workforce Participation Rates for 25- to 64-year-old Californians, 2016**



Source: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

**Fig 6. Median Wage and Gender Wage Gap in California, 2016**



Source: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

**Median wages for those who are in the workforce show inequities across race/ethnicity and gender.** This wage gap is in part due to variability in occupations. For example, Asians in the workforce earn about \$7,500 more than the state median wage and have high representation in high-wage STEM occupations. Latino, Black, and Native American workers on average earn below the median wage and are concentrated in lower-wage fields. Even those Latino, Black, and Native American workers employed in higher-wage fields tend to hold lower-paying jobs within those fields (see factsheets for detail).

In addition to these differences, across all racial/ethnic groups, the gender wage gap is strong. In contrast to the gender gap in education, **men consistently earn higher wages than women**, with the largest gap among White workers and the smallest gap among Black workers (Figure 6). Similar to the wage gaps between racial/ethnic groups, the gender wage gap is related to women having higher representation in lower-wage fields and more often holding lower-wage jobs within those fields (see factsheets for detail).

California's regions are vastly different in population size, landscape, and industry, leading to stark differences in median wages. **Even within regions, wages differ by race**, though these trends are often masked by aggregate data. For example, while wages for Pacific Islanders are near the overall state median, Pacific Islanders in the Bay Area (where most of California's Pacific Islanders reside) earn 24% less than the median wage in their region (Figure 7). Similarly, Asians statewide surpass the state median wage, but in some regions, they earn below the regional median.

Furthermore, while wages vary widely across regions within high-paying fields, there are smaller differences in wages within low-paying fields. For example, for someone employed in architecture and engineering, the difference in median wages between the Bay Area and the San Joaquin Valley is \$30,000. In comparison, the regional difference for someone employed in the low-wage personal care and service field is only \$3,000. This is particularly problematic for Black, Pacific Islander, and Latino workers who hold more of the low-wage jobs in urban areas.

**Fig 7. Wage Gaps from the Regional Median, 2016**

	MEDIAN PERSONAL WAGE	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
Bay Area	\$48,907	-39%	+23%	+13%	-23%	-23%	-24%
Central Coast	\$34,736	-30%	+39%	+28%	+13%	+0%	-2%
Central Sierra	\$35,158	-23%	+7%	N/A	N/A	-16%	N/A
Inland Empire	\$33,143	-17%	+29%	+19%	+3%	-14%	-9%
Los Angeles	\$33,713	-27%	+49%	+17%	+4%	+9%	+2%
Northern California	\$29,407	-26%	+5%	+7%	-5%	-11%	-44%
Orange	\$40,104	-33%	+39%	+15%	+5%	-5%	-5%
Sacramento-Tahoe	\$38,148	-24%	+16%	-4%	-15%	-14%	-26%
San Diego-Imperial	\$38,529	-31%	+25%	+8%	-5%	-19%	-11%
San Joaquin Valley	\$29,344	-21%	+40%	+6%	+7%	+1%	+5%
Upper Sac Valley	\$29,344	-15%	+7%	-23%	-31%	+3%	N/A
Statewide	\$37,478	-31%	+31%	+20%	-6%	-16%	-8%

Source: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

# Conclusion

To secure California's future economy, the state must incorporate an equity lens in improving outcomes for California's students and workforce. Overall trends in high school graduation rates, college completion, and employment hide stark challenges for different populations, such as educational outcomes for men of color, workforce outcomes for women, and overall outcomes for rural residents. Understanding disaggregated trends is a first step to securing a strong and vital future for the state's diverse citizens and its economy.

Two important public policy measures are critical to addressing the persistent inequities in California's education-to-employment pipeline.

**California needs a statewide, comprehensive education data system—with unique student identifiers—that incorporates P-12, postsecondary, and workforce outcomes and allows for disaggregation by race/ethnicity.** Longitudinal data are essential to clearly understand, document, and eradicate the inequitable pathways highlighted in this brief. Strong evidence shows that degrees and certificates lead to better economic outcomes, but the individual effect cannot be measured without clearly connecting postsecondary graduates to their workforce outcomes. Right now, those unique pieces of information reside in separate datasets, and we cannot easily account for students and workers who move in and out of systems or occupations.

The absence of a coordinated data system that describes individual students and workers across all segments prevents policymakers from making informed decisions about the state's investment in higher education systems. An integrated data system, publicly available to researchers, would enable greater insight on the impact that the state's postsecondary budget is having on postsecondary success for different groups and ultimately, the state's economy. It would also allow us to identify with more fidelity who benefits most from our postsecondary investments and who is being overlooked.

**California needs a statewide higher education coordinating entity.** A state agency for higher education is the most appropriate entity to own the data and its analysis and to hold the state and its various higher education segments accountable for equitable educational and economic outcomes. A key responsibility of this entity would be to inform state-level postsecondary and workforce planning through recommendations such as how best to invest state resources to close the degree gap. This degree gap will only be eliminated once policymakers and institutions address the racial, ethnic, and gender gaps highlighted in this brief.

## Notes

1. State of California Employment Development Department (2016). *California Occupational Employment Projections Between 2014 – 2024*. [http://www.labormarketinfo.edd.ca.gov/file/occp/ocproj/cal\\$occnarr-2014-2024.pdf](http://www.labormarketinfo.edd.ca.gov/file/occp/ocproj/cal$occnarr-2014-2024.pdf)
2. California Competes (2015). *Mind the gap: Delivering on California's promise for higher education*. <http://californiacompetes.org/degree-gap/>
3. Recognizing that there is not complete agreement on the best terminology, we use the term "Latino" throughout this brief to refer to men, women, and other Latino/a/x California residents.
4. "Asian" is applied to a wide range of nationalities that have historically different economic and educational outcomes, thus making generalizations about this racial/ethnic group particularly difficult. This broad category includes South Asian, Southeast Asian, East Asian, and Filipino because many data sources do not allow for disaggregation within the Asian population.
5. The course requirements, called "A through G," include seven subject areas for which UCs and CSUs stipulate certain amounts of credits that students must have completed with a C or better in high school to be eligible to enroll directly at a UC or CSU after high school.
6. Gao, N., Lopes, L., and Lee, G. (November 2017). Just the facts: *California's public high school graduation requirements*. Public Policy Institute of California. <http://www.ppic.org/wp-content/uploads/hs-graduation-requirements.pdf>
7. The completion rates are for completion within 150% of normal time, including community college students who complete an associate's degree in three years, first-time freshmen at four-year institutions who complete a bachelor's degree in six years, as well as students who transfer from community colleges to UCs and CSUs and complete a bachelor's degree within three years. Completion data for students who transferred from community college to private non-profit or for-profit colleges are not included in this figure.
8. Krause, E., and Sawhill, I. (May 2017). *What we know and don't know about declining labor force participation: A review*. The Brookings Institution. [https://www.brookings.edu/wp-content/uploads/2017/05/ccf\\_20170517\\_declining\\_labor\\_force\\_participation\\_sawhill1.pdf](https://www.brookings.edu/wp-content/uploads/2017/05/ccf_20170517_declining_labor_force_participation_sawhill1.pdf)



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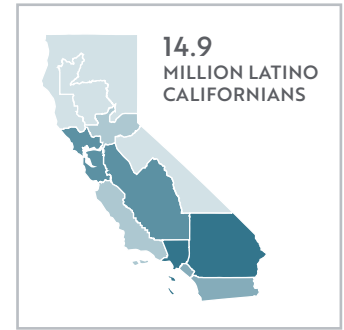
*This brief was made possible through support from the College Futures Foundation, Bill & Melinda Gates Foundation, James Irvine Foundation, Lumina Foundation, and Rosalinde & Arthur Gilbert Foundation.*

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# Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

## Focus on Latinos<sup>1</sup>

Latinos are a major driver of California's overall population growth. Comprising 39% of the state's population, Latinos live throughout urban and rural regions. California's Latinos, particularly Latina women, have made rapid improvements in educational outcomes over time, although large wage inequities persist.



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

High school graduation rates for Latino students have improved steadily and are now only slightly behind the state average. Despite these improvements, the rate at which Latino high school graduates are eligible to enroll at a UC/CSU lags the state average.

High school graduation rates for Latino men and women are highest in the state in Orange County and the Inland Empire—both over 85% compared to the 81% state average. UC/CSU eligibility rates for high school graduates are highest for Latinos in Los Angeles at 45%, compared to the 37% state average.

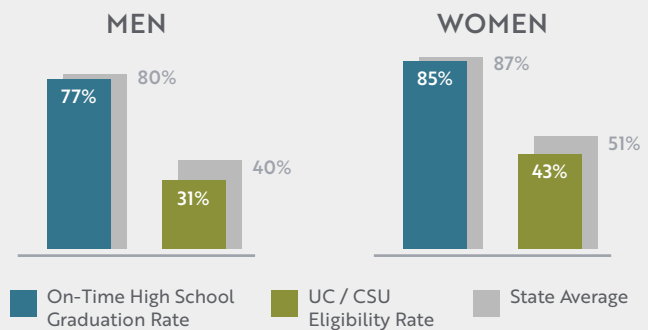


FIG 1



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

Latino college students primarily enroll in community colleges and are underrepresented at four-year colleges. These trends hold for both men and women.

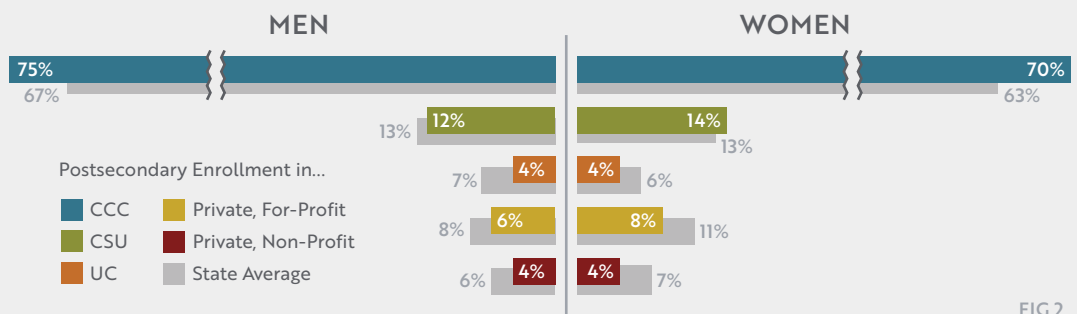


FIG 2

**47%** of Latino college students earn an associate's degree within 3 years or a bachelor's degree within 6 years, compared to the state average of 55%. Improvements in Latino high school completion and college enrollment have not yet translated into proportional gains in college outcomes.

FIG 3

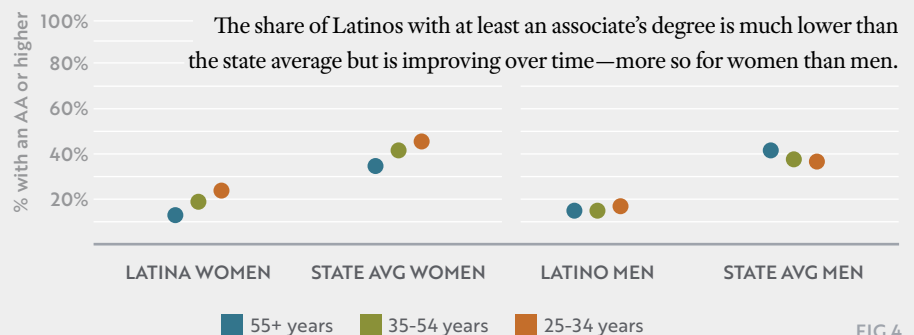


FIG 4



SNAPSHOT

# Improved Education Outcomes for Latinos

While Latinos continue to be underrepresented at four-year colleges (see previous page), trends are improving. The combination of increasing numbers of Latinos in California and improved high school completion outcomes have contributed to higher college enrollment for Latinos. The Latino share of UC and CSU enrollment has been steadily increasing over the last 6 years.

	2010	2016
Latino Population in CA	14.1 million	14.9 million
High School Graduation Rate	71%	81%
UC / CSU Eligibility Rate	27%	37%
% of UC Enrollment that is Latino	18%	24%
% of CSU Enrollment that is Latino	31%	39%

FIG 5



**HIGH SCHOOL**      **POSTSECONDARY EDUCATION**      **WORKFORCE**

Workforce participation rates are high for Latinos, although the workforce participation gender gap is larger for Latinos than for any other racial/ethnic group.

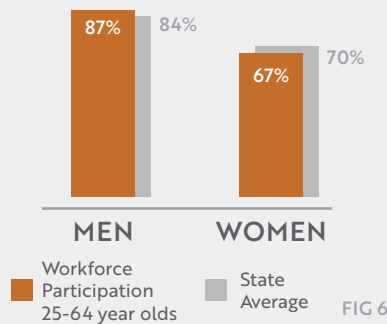


FIG 6

Among working adults, Latino men and women both earn well below the state median. Latino men earn 27% more than Latina women, a smaller gap than the state gender gap of 32%.

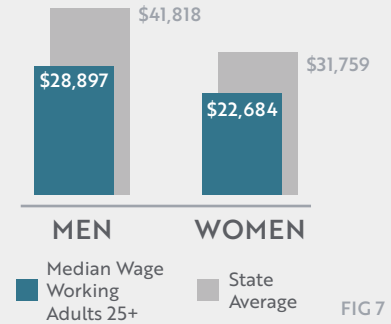


FIG 7

Latinos are overrepresented in low-wage jobs. Consequently, Latinos in the workforce earn less than the state median wage for the top fields in which they are employed.

However, trends show younger Latinos choosing higher-paying jobs. The share of Latinos aged 25 to 34 who are employed in low-wage fields like building and grounds maintenance (median wage: \$19,563) has dropped, while the share in middle-wage occupations like sales (median wage: \$33,713) is increasing.

Top Occupations for Latino Men (Latino Median Wage - State Median Wage)	Top Occupations for Latina Women (Latina Median Wage - State Median Wage)
Construction & Extraction (-13%)	Office & Administrative Support (-8%)
Transportation & Material Moving (-4%)	Building & Grounds Cleaning & Maintenance (+0%)
Production Occupations (-12%)	Sales & Related Occupations (-20%)
Building & Grounds Cleaning & Maintenance (-5%)	Personal Care & Service (-7%)
Sales & Related Occupations (-22%)	Production Occupations (-10%)

FIG 8

## Sources

<sup>1</sup> Recognizing that there is not complete agreement on the best terminology, we use the term “Latino” throughout this brief to refer to men, women, and other Latino/a/x California residents.

Fig 1: California Competes’ calculations of California Department of Education data for 2015-16

Fig 2: California Competes’ calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

Fig 3: California Competes’ calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

Fig 5: California Competes’ calculations of American Community Survey data accessed through American Factfinder, California Department of Education data, and data from the UC and CSU

Fig 4, 6, 7, 8: California Competes’ calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data



# Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

## Focus on Whites

Whites in California make up 38% of the state's population, and this share has been decreasing over time. White Californians have experienced strong educational and career outcomes overall, but the data reveal large variations by region.



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

White high school students graduate high school on-time and are eligible for UC/CSU at above-average rates, but UC/CSU eligibility is lower for White students in rural regions like the Central Sierra (28%), Northern California (32%), and Upper Sacramento Valley (31%).

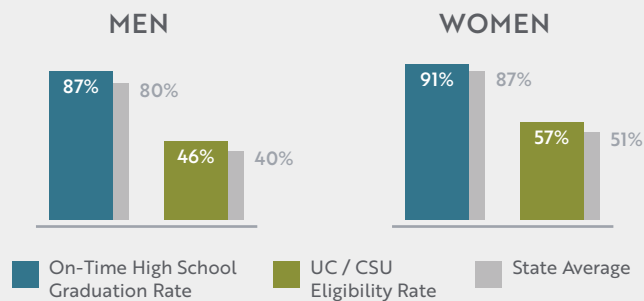


FIG 1



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

Like other racial/ethnic groups, the majority of White college students are at a community college. However, the percentage of White college students enrolled in private non-profit colleges is higher than the state average. This was particularly true in Los Angeles, Orange County, and the Inland Empire.

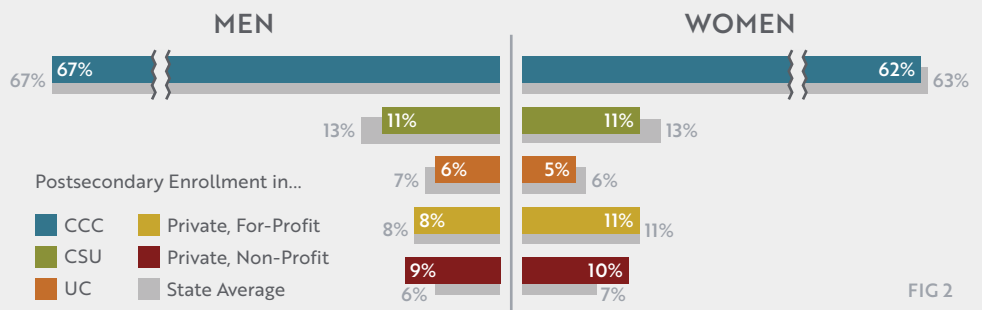


FIG 2

**60%** of White college students earn an associate's degree within 3 years or a bachelor's degree within 6 years, compared to the state average of 55%. White college students have completion rates above state averages in all segments except at for-profits. Across all segments, White women's completion rates are higher than White men's.

FIG 3

Younger White women have higher college attainment rates than older ones, but college attainment is similar across age groups for White men.

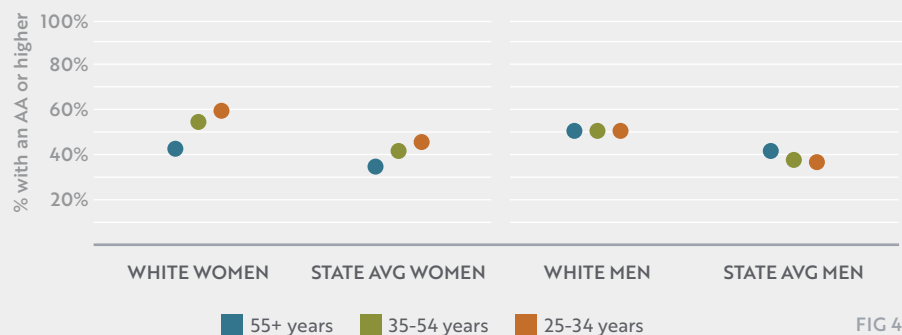


FIG 4

SNAPSHOT

## Regional Differences in College Attainment for White Adults

College completion rates for White adults are much higher in predominantly urban regions like the Bay Area, Los Angeles, and Orange County, compared to more rural regions like the Central Sierra, San Joaquin Valley, and Upper Sacramento Valley. Within each region, the gender gap between White men and women is small.

### White Adults With at Least an Associate's Degree, by Region

	MEN	WOMEN
Bay Area	62%	61%
Central Coast	53%	51%
Central Sierra	33%	35%
Inland Empire	37%	36%
Los Angeles	57%	55%
Northern California	35%	38%
Orange	58%	54%
Sacramento-Tahoe	46%	45%
San Diego-Imperial	56%	54%
San Joaquin Valley	33%	34%
Upper Sacramento Valley	32%	35%

FIG 5



#### HIGH SCHOOL

#### POSTSECONDARY EDUCATION

#### WORKFORCE

White adults have workforce participation rates that are similar to state averages. Workforce participation rates for White adults are highest in the Bay Area, Los Angeles, and San Diego-Imperial regions.

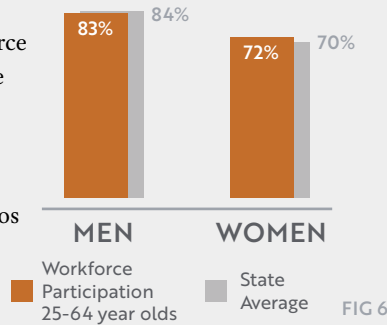


FIG 6

White working adults have the highest median wages of any racial/ethnic group but also have the largest gender gap in wages, at 49%.

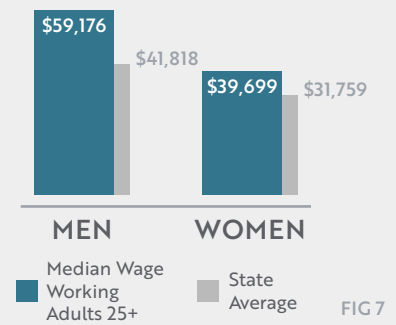


FIG 7

White men and women have high rates of employment in higher-wage fields, such as management. Within the top fields in which they are employed, White Californians tend to make more than the state median wage in those fields.

Top Occupations for White Men (White Median Wage - State Median Wage)	Top Occupations for White Women (White Median Wage - State Median Wage)
Management (+14%)	Office & Administrative Support (+6%)
Sales and Related Occupations (+31%)	Management (+11%)
Construction and Extraction (+39%)	Education, Training, and Library (+17%)
Transportation and Material Moving (+22%)	Sales and Related Occupations (+23%)
Office and Administrative Support (+11%)	Healthcare Practitioners and Technical (+7%)

FIG 8

## Sources

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Fig 2: California Competes' calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

Fig 3: California Competes' calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

Fig 4, 5, 6, 7, 8: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

# Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

## Focus on Asians<sup>1</sup>

Thirteen percent of the state's population identify as Asian, most of whom are concentrated in the Bay Area, Los Angeles, and Orange County. Asians in California generally have strong education and economic outcomes, though substantial differences exist by region and gender.



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

High school completion rates are similarly high for Asian men and women, but Asian women have higher UC/CSU eligibility rates. Nearly three-quarters of Asian high school students graduate eligible for a UC or CSU.

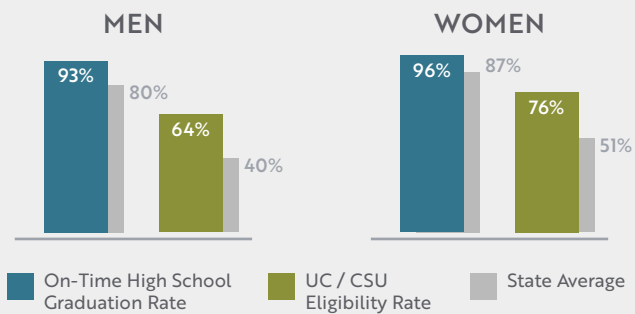


FIG 1



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

Asian students in California have high rates of enrollment at four-year institutions. While the majority of Asian college students are enrolled at community colleges, Asians attend UCs at more than twice the rate of the state average.

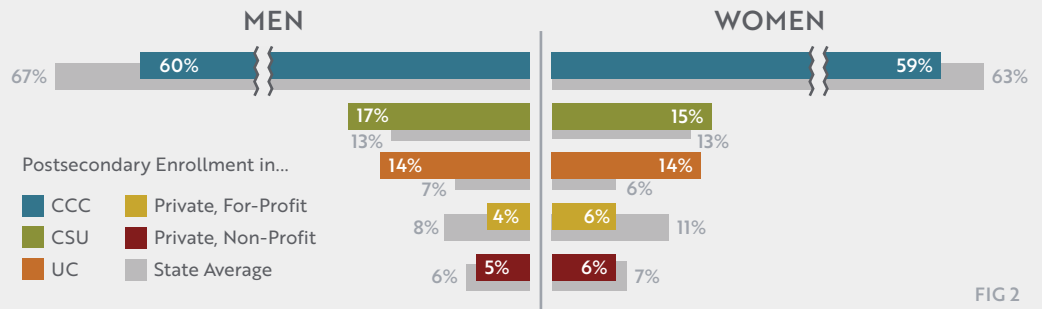


FIG 2

**68%** of Asian college students earn an associate's degree within 3 years or a bachelor's degree within 6 years, compared to the state average of 55%. Postsecondary completion rates for Asians are higher than average at all segments. At community colleges, completion rates for Asians are about 1.5 times the state average.

FIG 3

College completion is increasing substantially over time for Asian adults, particularly for women.

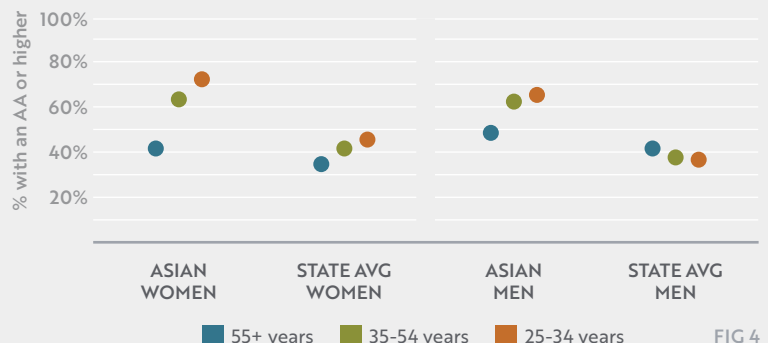


FIG 4

SNAPSHOT

## Regional Differences in UC/CSU Eligibility For Asians

High average achievement for Asians often masks wide differences within the population. For example, Asians in the San Joaquin Valley, Central Coast, and Northern California regions have much lower UC/CSU eligibility rates than Asians in the Bay Area, Los Angeles, and Orange County.

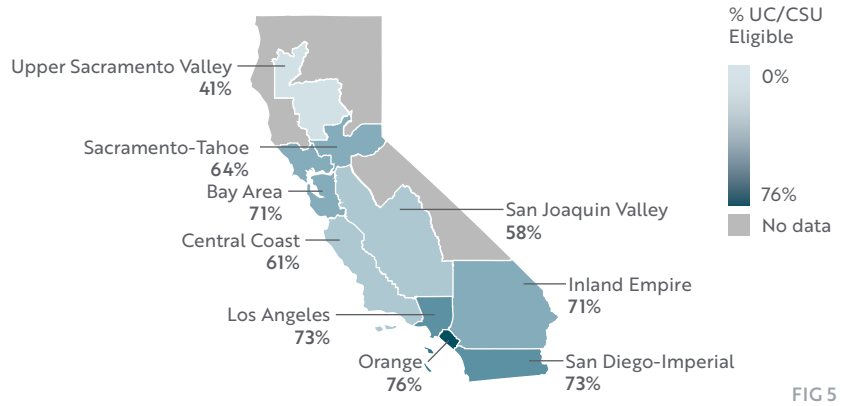


FIG 5



HIGH SCHOOL

POSTSECONDARY EDUCATION

WORKFORCE

Asian adults have workforce participation rates that are similar to state averages.

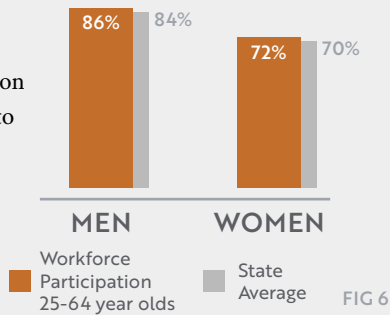


FIG 6

Among working adults, Asian men and women both earn well above the state median. Asian men earn 28% more than Asian women, a smaller gap than the state gender gap of 32%.

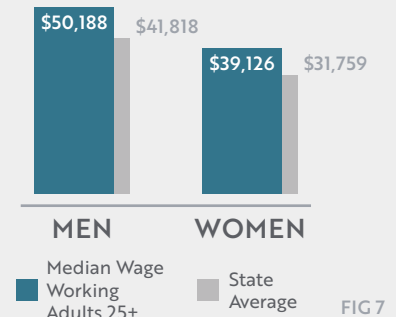


FIG 7

The wage gap between Asian men and women reflects the distinct fields in which they are more frequently employed. For example, a higher share of Asian men than women are employed in the high-wage management and computer/mathematical fields. Asians earn higher wages in most of the top fields in which they are employed, compared to the state median for those fields.

Top Occupations for Asian Men (Asian Median Wage - State Median Wage)	Top Occupations for Asian Women (Asian Median Wage - State Median Wage)
Management (+7%)	Office & Administrative Support (+8%)
Computer and Mathematical (+9%)	Healthcare Practitioners and Technical (+19%)
Sales and Related Occupations (-17%)	Management (+11%)
Office and Administrative Support (+4%)	Personal Care and Service (+1%)
Architecture and Engineering (+9%)	Business and Financial Operations (+9%)

FIG 8

## Sources

<sup>1</sup> "Asian" is applied to a wide range of nationalities that have historically different economic and educational outcomes, thus making generalizations about this racial/ethnic group particularly difficult. This broad category includes South Indian, Southeast Asian, East Asian, and Filipino because many data sources do not allow for disaggregation within the Asian population.

Fig 1: California Competes' calculations of California Department of Education data for 2015-16

Fig 2: California Competes' calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

Fig 3: California Competes' calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

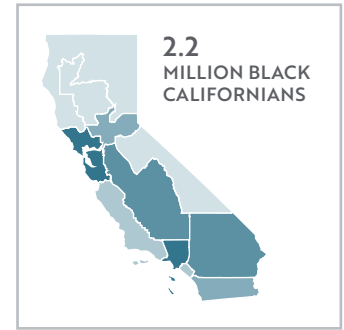
Fig 5: California Competes' calculations of California Department of Education data for 2015-16

Fig 4, 6, 7, 8: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

# Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

## Focus on Blacks

Black Californians comprise about 6% of the state's population, a share that has remained steady for the past 15 years. California's Black population has made incremental gains in degree attainment and wages over time, but more so for women than men.



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

Black students' high school outcomes are behind the state average but have improved over time. Black women are faring better than Black men by considerable margins in high school outcomes.

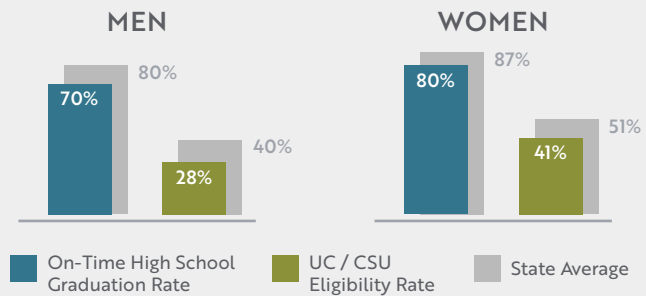


FIG 1



### HIGH SCHOOL

### POSTSECONDARY EDUCATION

### WORKFORCE

Black students enroll primarily in postsecondary institutions with low completion rates: community colleges, followed by for-profit institutions. Black students are twice as likely to enroll in private for-profit colleges than the state average. This is most pronounced in the San Diego-Imperial region, where 54% of Black men and 74% of Black women college students are enrolled at a for-profit institution, respectively.

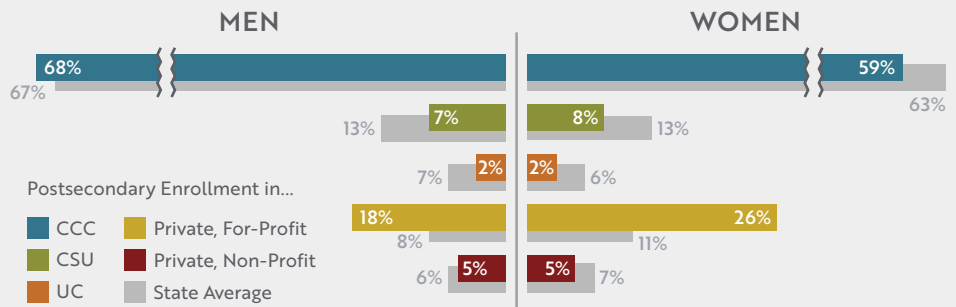


FIG 2

**38%** of Black college students earn an associate's degree within 3 years or a bachelor's degree within 6 years, compared to the state average of 55%. Low completion rates are a major leak in the pipeline for Black college students. Black adults are more likely than any other racial/ethnic group to have started college but not finished.

FIG 3

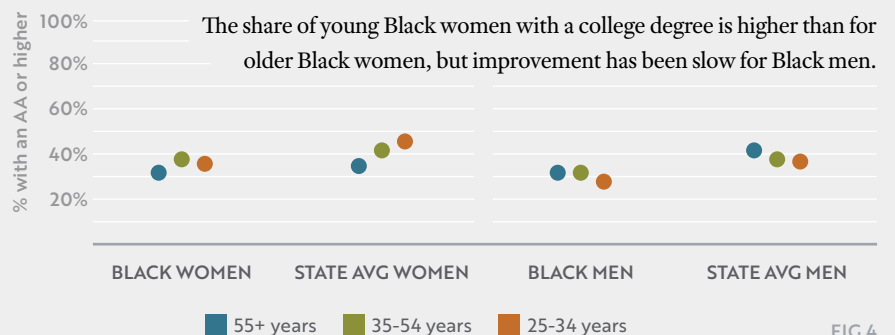


FIG 4

SNAPSHOT

# Gender Gaps in Outcomes for Black Californians

Gender differences in high school and college outcomes are particularly pronounced for Black Californians. Further, while workforce gaps between Black men and women are much smaller than the state's overall gender gap, this is largely due to low indicators for Black men, rather than high ones for Black women.

	Black Gender Gap (Men - Women)	State Gender Gap (Men - Women)
High School Graduation Rate	-14%	-8%
UC/CSU Eligibility Rate	-47%	-29%
Postsecondary Completion Rate	-28%	-12%
Workforce Participation Rate	-2%	+17%
Median Wage	+14%	+24%

FIG 5



HIGH SCHOOL

POSTSECONDARY EDUCATION

WORKFORCE

While workforce participation for Black women is similar to the state average, Black men's participation rate of 70% is far below the state average. As a result, Blacks are the only racial/ethnic group without a gender gap in workforce participation rates.

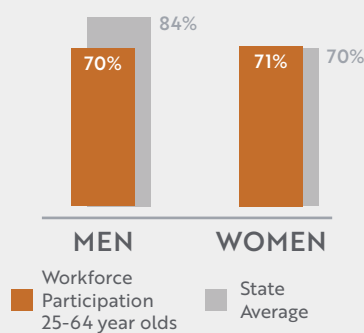


FIG 6

Among working Black adults, men earn 16% more than women in California's workforce, a much smaller gap than the state gender gap of 32%.

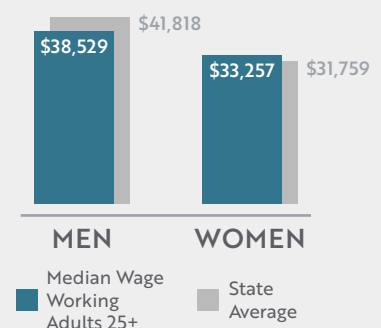


FIG 7

Black adults largely enter lower-paying fields such as transportation, office and administrative support, and personal care. Within occupational fields, Black employees' wages are often below that of the statewide workforce in the same fields.

Top Occupations for Black Men (Black Median Wage - State Median Wage)	Top Occupations for Black Women (Black Median Wage - State Median Wage)
Transportation and Material Moving (+0%)	Office and Administrative Support (+8%)
Office and Administrative Support (+2%)	Personal Care and Service (+2%)
Management (-20%)	Sales and Related Occupations (-12%)
Sales and Related Occupations (-24%)	Management (-5%)
Protective Service (-45%)	Healthcare Practitioners and Technical (-13%)

FIG 8

## Sources

Fig 1: California Competes' calculations of California Department of Education data for 2015-16

Fig 2: California Competes' calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

Fig 3: California Competes' calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

Fig 5: California Competes' calculations of California Department of Education data for 2015-16, Integrated Postsecondary Education Data System data for 2015-16, and American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

Fig 4, 6, 7, 8: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

# Focus on Native Americans

Native Americans make up 1% of the state's population, a steady share over the last 15 years. The largest numbers of Native Americans are in Los Angeles, Northern California, and the San Joaquin Valley. California's Native Americans have experienced stagnating progress in educational and economic outcomes.



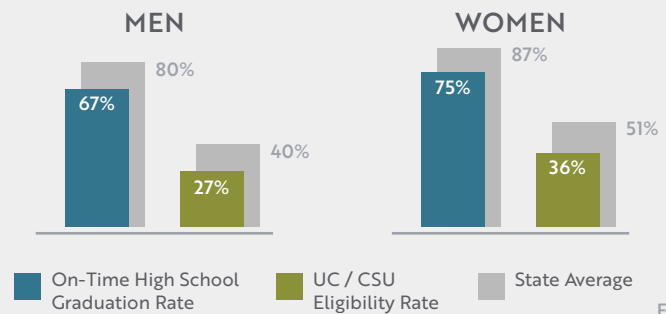
**HIGH SCHOOL**

POSTSECONDARY EDUCATION

WORKFORCE

High school outcomes for Native Americans are the lowest of all racial/ethnic groups, but are gradually improving.

Most Native American high school students do not graduate ready to enroll in a UC or CSU. Given that 75% of Native Americans live outside California's two largely urbanized regions (the Bay Area and Los Angeles), lack of access to A-G courses in rural regions particularly disadvantages this group.

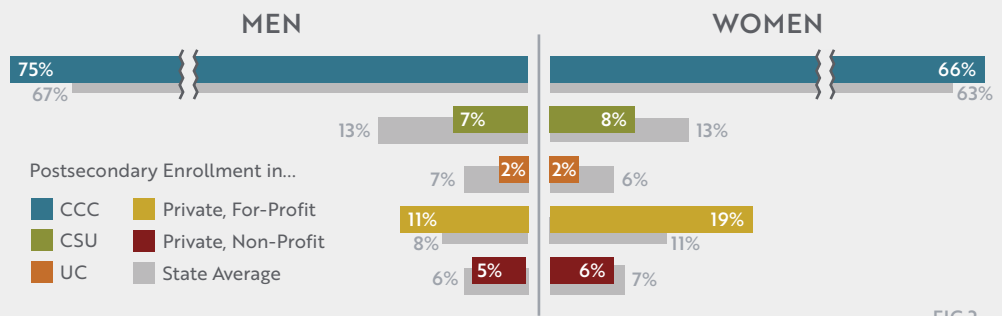


HIGH SCHOOL

**POSTSECONDARY EDUCATION**

WORKFORCE

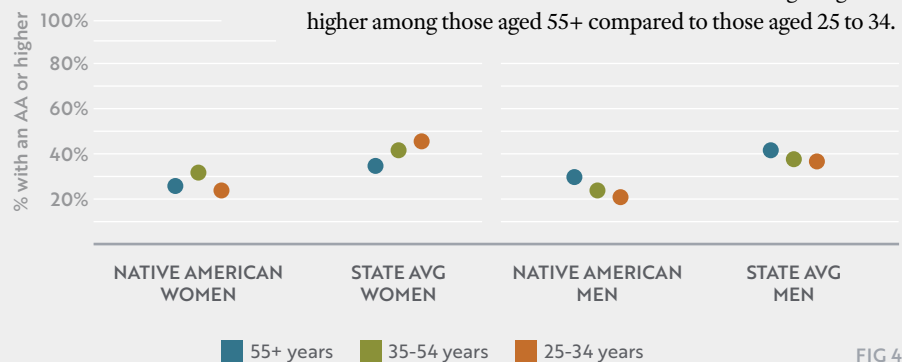
With relatively low rates of high school completion and even lower UC/CSU eligibility, Native American students face limited opportunities for higher education. Native American students are underrepresented at UCs and CSUs and are overrepresented in community colleges and for-profit colleges.



**48%** of Native American college students earn an associate's degree within 3 years or a bachelor's degree within 6 years, compared to the state average of 55%. Native American college students have completion rates below state averages in all segments, and Native American women's completion rates are higher than Native American men's across all segments.

FIG 3

Native Americans have been disadvantaged with little or no progress on college attainment rates. The share of Native American adults with a college degree is higher among those aged 55+ compared to those aged 25 to 34.





SNAPSHOT

# Workforce Participation for Native Americans

For Native Americans aged 25-64, with each level of educational attainment, workforce participation rates improve substantially and move closer to the state average for all adults with the same education level.

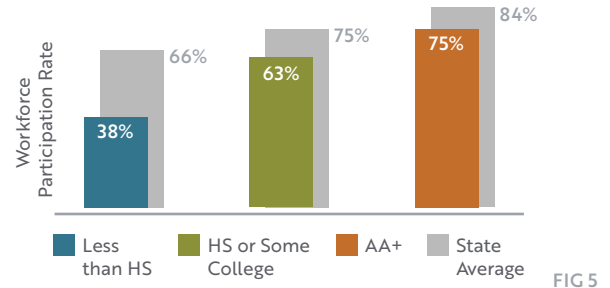


FIG 5



HIGH SCHOOL

POSTSECONDARY EDUCATION

WORKFORCE

Workforce participation rates for Native Americans are far below state averages. This is true for both Native American men and women.

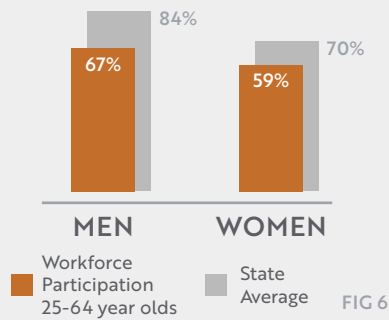


FIG 6

Among working Native American adults, men earn 30% more than women in California's workforce, close to the state gender gap of 32%.

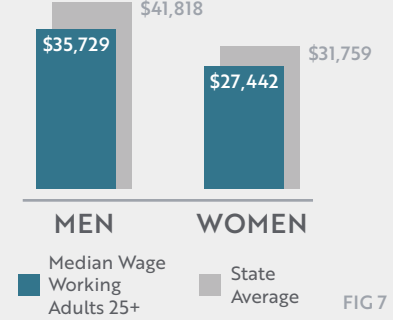


FIG 7

Low levels of educational attainment are reflected in lower-paying occupations for the Native American workforce. Median wage is substantially lower for Native American workers relative to the total state population, and this difference is likely due to both geography and specific occupations. Native Americans in California mostly reside in regions with lower average wages. Exacerbating this inequity are low workforce participation rates (see above) and jobs in lower-paying fields.

Top Occupations for Native American Men (Native American Median Wage - State Median Wage)	Top Occupations for Native American Women (Native American Median Wage - State Median Wage)
Construction and Extraction (+18%)	Office and Administrative Support (-5%)
Management (-24%)	Sales and Related Occupations (-14%)
Transportation and Material Moving (-9%)	Personal Care and Service (+18%)
Sales and Related Occupations (-28%)	Management (-26%)
Production Occupations (+2%)	Education, Training, and Library (-37%)

FIG 8

## Sources

Fig 1: California Competes' calculations of California Department of Education data for 2015-16

Fig 2: California Competes' calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

Fig 3: California Competes' calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

Fig 4, 5, 6, 7, 8: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

# Focus on Pacific Islanders

Pacific Islanders make up about 1% of the state's population. They largely reside in the Bay Area and Los Angeles. California's Pacific Islanders have improved high school outcomes that have yet to translate into improved college and employment outcomes.

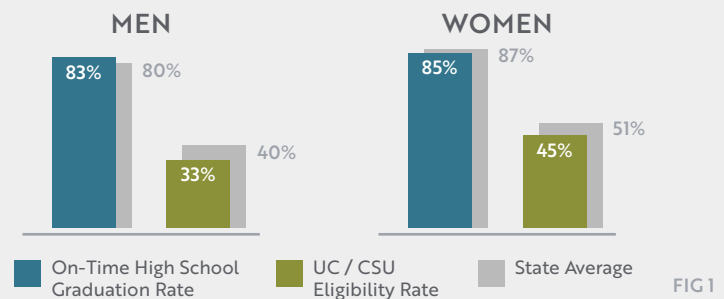


**HIGH SCHOOL**

**POSTSECONDARY EDUCATION**

**WORKFORCE**

Despite strong high school completion rates, low rates of UC/CSU eligibility limit Pacific Islanders' postsecondary options. As with other racial/ethnic groups, high school outcomes are stronger for women. The gap in UC/CSU eligibility between Pacific Islander students and the regional averages are smallest in Los Angeles and Orange County but largest in the Bay Area, the region with the largest number of Pacific Islander students.

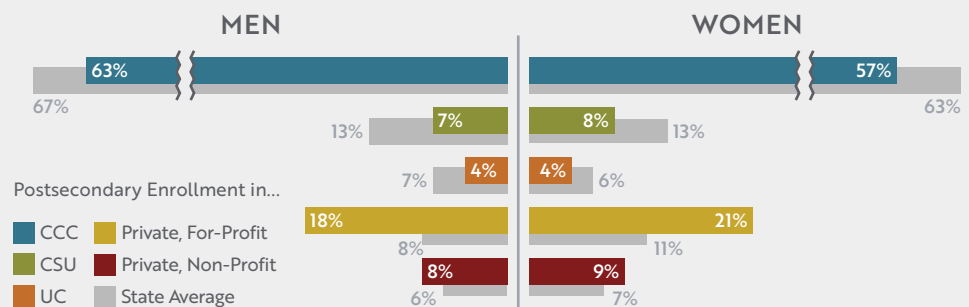


**HIGH SCHOOL**

**POSTSECONDARY EDUCATION**

**WORKFORCE**

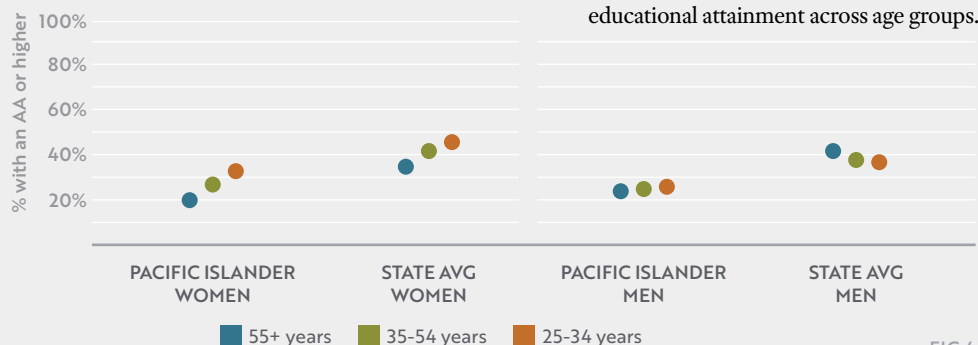
Given low rates of UC/CSU eligibility, most Pacific Islander college students are enrolled at community colleges and underrepresented at UC and CSU. They are also overrepresented at private for-profit colleges, especially in the Orange and San Diego-Imperial regions: about one-third of all Pacific Islander college students in those regions enrolled in a for-profit.



**49%** of Pacific Islander college students earn an associate's degree within 3 years or a bachelor's within 6 years, compared to the state average of 55%. As with other racial/ethnic groups, completion rates are higher for women than for men.

FIG 3

Degree attainment is increasing across age groups for Pacific Islander women, but so is the share who left college without a degree (not shown). Pacific Islander men have not had strong improvement in educational attainment across age groups.



SNAPSHOT

# Regional Wage Differences for Pacific Islanders

The state-level median wage for Pacific Islanders looks relatively high because most Pacific Islander workers live in the high-wage Bay Area. But in most regions of the state, Pacific Islanders make below the regional median wage.

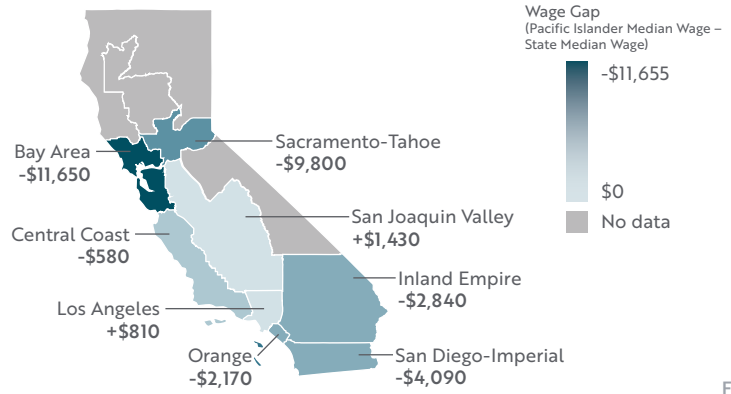


FIG 5



HIGH SCHOOL

POSTSECONDARY EDUCATION

WORKFORCE

Pacific Islander adults have workforce participation rates that are similar to state averages.

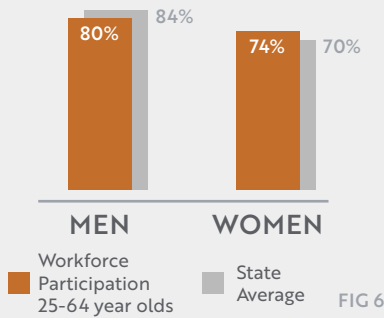


FIG 6

Among working Pacific Islander adults, men earn 24% more than women in California's workforce, a smaller gap than the state gender gap of 32%.

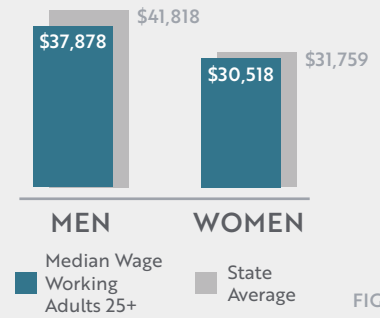


FIG 7

Pacific Islanders tend to work in lower-paying fields and hold lower-paying jobs within those fields compared to state averages. For example, within the office and administrative support field, Pacific Islanders are underrepresented as general office clerks (median salary \$52,000) and overrepresented in lower-wage data entry positions (median salary \$22,000).

Top Occupations for Pacific Islander Men (Pacific Islander Median Wage - State Median Wage)	Top Occupations for Pacific Islander Women (Pacific Islander Median Wage - State Median Wage)
Transportation and Material Moving (-2%)	Office and Administrative Support (+8%)
Office and Administrative Support (+2%)	Personal Care and Service (+42%)
Sales and Related Occupations (-11%)	Sales and Related Occupations (-11%)
Construction and Extraction (-5%)	Management (-24%)
Production Occupations (+6%)	Business and Financial Operations (-18%)

FIG 8

## Sources

Fig 1: California Competes' calculations of California Department of Education data for 2015-16

Fig 2: California Competes' calculations of Integrated Postsecondary Education Data System (IPEDS) data for 2015-16

Fig 3: California Competes' calculations of IPEDS data for 4-year cohort starting in 2010 and 2-year cohort starting in 2013

Fig 4, 5, 6, 7, 8: California Competes' calculations of American Community Survey Public Use Microdata Sample (PUMS) 2016 five-year estimate data

# Opportunity Imbalance: Race, Gender, And California's Education-To-Employment Pipeline

## Appendix

### Data Definitions

#### RACIAL/ETHNIC GROUPS

The data sources used for this brief use slightly differing definitions of racial/ethnic groups. We recognize that creating racial/ethnic categories are somewhat problematic in that they cluster peoples with varying origins and cultures. Nevertheless, we utilize and present commonly defined racial/ethnic groups in this brief because revealing trends and differences, even if the groups are imperfectly defined, is crucial to improving outcomes for individual Californians and for the state overall. We use the racial/ethnic groups as they are defined in data sources and combine groups where necessary to make consistency across sources. All groups are mutually exclusive, and we do not include in our analyses people who identify with more than one race or ethnicity. For the purpose of this brief, we use the following definitions of racial/ethnic groups:

RACIAL/ETHNIC GROUP	DESCRIPTION
Latino	Includes anyone of Latino or Hispanic descent, regardless of race
White	Includes any non-Latino people of European, Middle Eastern, or Northern African descent
Asian	Includes any non-Latino people descending from South Asia, Southeast Asia, East Asia, and the Philippines
Black	Includes Black or African American non-Latino (not including those descending from Northern Africa origins)
Native American	Includes non-Latino American Indians and Alaskan Natives of any tribal affiliation
Pacific Islander	Includes non-Latino people descending from Pacific Islands such as Guam, Hawaii, and Samoa

#### REGIONS

We define California's regions as follows:



REGION	COUNTIES
Bay Area	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma
Central Sierra	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne
Central Coast	Monterey, San Luis Obispo, San Benito, Santa Barbara, Ventura
Inland Empire	Riverside, San Bernardino
Los Angeles	Los Angeles
Northern California	Humboldt, Lake, Mendocino, Del Norte, Lassen, Modoc, Plumas, Siskiyou, Sierra, Nevada, Shasta
Orange	Orange
Sacramento-Tahoe	El Dorado, Placer, Sacramento, Sutter, Yuba, Yolo
San Diego-Imperial	San Diego, Imperial
San Joaquin Valley	Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare
Upper Sacramento Valley	Butte, Colusa, Glenn, Tehama, Trinity

## HIGH SCHOOL

INDICATOR	DEFINITION	SOURCE
On-Time High School Graduation Rate	The percent of students who graduated from high school by the spring of 2016 out of those who first enrolled in 9th grade in 2012	CA Department of Education: <a href="https://data1.cde.ca.gov/dataquest/">https://data1.cde.ca.gov/dataquest/</a>
UC/CSU Eligibility Rate	The percent of all high school graduates in 2016 who completed the necessary courses to be eligible to enroll directly in a UC or CSU. Note that the denominator for the UC/CSU eligibility rate is different from the denominator for On-Time High School Graduation.	CA Department of Education: <a href="https://data1.cde.ca.gov/dataquest/">https://data1.cde.ca.gov/dataquest/</a>

## POSTSECONDARY EDUCATION

INDICATOR	DEFINITION	SOURCE
College Enrollment	Part-time or full-time enrollment at any point in the 2015-16 school year in a public or private college in California. We only include undergraduate enrollment in this analysis. We use the following definitions for segments of postsecondary education: <ul style="list-style-type: none"> <li>• CCC – One of 114 schools in the California Community College system</li> <li>• CSU – One of 23 California State University campuses</li> <li>• UC – One of 9 University of California campuses (UC San Francisco is not included in this analysis because it does not enroll undergraduate students)</li> <li>• Private for-profit – includes 2-year and 4-year institutions</li> <li>• Private non-profit – includes 2-year and 4-year institutions</li> </ul>	A Integrated Postsecondary Education Data System: <a href="https://nces.ed.gov/ipeds/">https://nces.ed.gov/ipeds/</a>
College Completion	The graduation rate status as of August 31, 2016, within 150% of normal, which is within 6 years for students who began four-year programs in 2010 and within 3 years for students who began 2-year programs in 2013. We also include transfer students who complete a bachelor's degree within 3 years of transfer, although these data on transfers are only available from the CSU and UC and not for private colleges.	Integrated Postsecondary Education Data System: <a href="https://nces.ed.gov/ipeds/">https://nces.ed.gov/ipeds/</a> CSU Analytic Studies: <a href="http://www.calstate.edu/as/index.shtml">http://www.calstate.edu/as/index.shtml</a> UC Infocenter: <a href="https://www.universityofcalifornia.edu/infocenter">https://www.universityofcalifornia.edu/infocenter</a>
Adults with a College Degree	The share of adults in various age groups who had earned an associate's degree or higher as of 2016.	Census Bureau American Community Survey 2016 5-year estimates: <a href="https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t">https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t</a>

## WORKFORCE

INDICATOR	DEFINITION	SOURCE
Workforce Participation Rate	The percent of the population aged 25 to 64 who are either employed or seeking employment.	Census Bureau American Community Survey 2016 5-year estimates: <a href="https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t">https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t</a>
Median Wage	The median personal wage in 2016 dollars (adjusted for inflation) for adults in the workforce aged 25 and over.	Census Bureau American Community Survey 2016 5-year estimates: <a href="https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t">https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t</a>
Occupations	Percent of workforce aged 25 and over who reported working part-time or full-time employment in an occupational category. Fields are broad categories that contain many more specific occupations. We use the Bureau of Labor Statistics 2-digit Standard Occupational Category (SOC) codes to classify occupational fields.	Census Bureau American Community Survey 2016 5-year estimates: <a href="https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t">https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t</a>

# Analysis Methodology

## CALIFORNIA DEPARTMENT OF EDUCATION

High school graduation and UC/CSU eligibility data are downloaded from the California Department of Education's DataQuest portal. We use the state's county-wide statistics and aggregate those to the regional level. In order to adhere to other data sources' definitions of racial/ethnic subgroups, we combine data on Asian and Filipino students, which CDE reports separately.

## INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM

Postsecondary enrollment and completion data are downloaded from the federal Department of Education National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS) for the 743 institutions in California that report to IPEDS. All data are for the 2015-16 school year. To produce the analyses in this report, we merge the following IPEDS tables:

- Institutional characteristics (hd2016): We use the institutional STATE to limit all analyses to institutions in California (743 total), SECTOR to identify segments (combining private institutions into for-profit and nonprofit, regardless of whether they are 2-year or 4-year), and COUNTY to aggregate data by region.
- Enrollment (effy2016): We limit all enrollment analyses to undergraduate (EFFYLEV=2) and aggregate data by gender and racial/ethnic subgroup.
- Completions (gr2016): We use the 150% completion number (CHRTSTAT=13) divided by the adjusted cohort size (CHRTSTAT= 12) to calculate completion rates for each gender and subgroup. Although IPEDS includes only first-time freshman, we add data for community college transfers reported by the CSU and UC to the first-time freshman completion rates reported in IPEDS. For community college transfers, we use bachelor’s degree completion within three years of transfer. The UC combines Asian and Pacific Islanders in their completion data, so we include the combined Asian/Pacific Islander transfer rate into the Asian completion rate and do not include UC transfers in the Pacific Islander completion rate.

## CENSUS DEMOGRAPHIC AND WORKFORCE DATA

We use the 2016 five-year estimates from the American Community Survey. We aggregate the Public Use Micro Area (PUMA) into regions. Although Census data asks for Hispanic/Latino origin separate from race, we combine these two fields into one mutually exclusive racial/ethnic group, labeling anyone who reports Hispanic or Latino origin as Latino and all non-Hispanic people by their race. All analyses use the person weight (PWGTP) to tabulate the population that belongs to each racial/ethnic group and gender. To produce the analyses in this report, we use the following PUMS data:

- Adults with a College Degree: We combine the highest level of education completed (SCHL) for anyone over the age of 25 who reported either an associate’s, bachelor’s, or graduate degree.
- Workforce Participation: We use the ACS employment status recode (ESR) and include all those between the ages of 25 and 64 not listed as “not in the labor force” in the participation rate.
- Wages: We adjust personal wages (WAGP) by the inflation factor (ADJINC) to convert reported wages to constant 2016 dollars and calculate medians for each group member who reported any wages and was over the age of 25.
- Occupations: We use the first two digits of the Standard Occupation Classification (SOC) codes (SOCP) to classify occupations into one of 23 categories. We include anyone over the age of 25, including those working part-time.

All estimates of population size, workforce representation, and income presented in this report have a margin of error, and this margin is larger for groups that are smaller in size. Confidence intervals for all figures utilizing Census data used in this report are provided below.

### 95% Confidence intervals for PUMS estimates of population size by region

REGION	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
Bay Area	1868971 - 1874581	3215417 - 3223005	1863927 - 1877621	449214 - 458160	17056 - 19174	42862 - 45236
Central Coast	888653 - 893053	941523 - 946419	113911 - 118533	35196 - 38384	5179 - 6777	3289 - 4477
Central Sierra	25018 - 26372	145273 - 147157	1582 - 2366	2282 - 3280	3557 - 4843	134 - 598
Inland Empire	2189942 - 2195296	1506050 - 1512476	276977 - 283439	304147 - 312069	15496 - 18130	10164 - 12596
Los Angeles	4859148 - 4864276	2683398 - 2690550	1411318 - 1421726	794666 - 804614	16979 - 19609	22476 - 25440
Northern California	91925 - 93993	531818 - 534736	13226 - 15114	9501 - 11337	18965 - 21549	1046 - 1714
Orange	1069275 - 1071945	1313930 - 1318428	593815 - 601893	45469 - 49153	5588 - 7240	7744 - 9586
Sacramento-Tahoe	517760 - 520292	1292448 - 1296926	298339 - 305411	155735 - 161263	9492 - 11826	17317 - 18825
San Diego-Imperial	1222425 - 1226393	1537310 - 1544380	367051 - 374013	153438 - 159110	12942 - 15026	12538 - 14918
San Joaquin Valley	2078141 - 2082573	1405258 - 1411186	303427 - 309853	176645 - 182253	17789 - 20511	9714 - 11822
Upper Sacramento Valley	73505 - 74587	240747 - 242923	10932 - 12414	3838 - 4886	3303 - 4655	308 - 844

### 95% Confidence intervals for PUMS estimates of college degree or certificate attainment by ethnicity and age group

	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
<b>MEN</b>						
25 to 34	16.6% - 17.46%	50.09% - 51.32%	64.76% - 66.35%	26.46% - 28.66%	15.89% - 25.45%	21.1% - 30.38%
35 to 54	14.86% - 15.41%	50.98% - 51.65%	62.76% - 63.83%	30.99% - 32.96%	21.07% - 27.32%	20.69% - 28.72%
55 and over	14.85% - 15.63%	51.07% - 51.69%	48.89% - 50.08%	31.55% - 33.34%	26.95% - 33.28%	19.28% - 28.51%
<b>WOMEN</b>						
25 to 34	23.96% - 24.88%	59.8% - 60.8%	71.9% - 73.55%	34.85% - 37.58%	18.89% - 29.76%	29.24% - 37.67%
35 to 54	18.67% - 19.32%	54.92% - 55.72%	63.16% - 64.26%	36.8% - 38.92%	29.13% - 35.54%	23.71% - 30.9%
55 and over	12.33% - 12.93%	42.6% - 43.18%	40.97% - 42.05%	30.64% - 32.63%	22.95% - 28.89%	16.67% - 24.06%

### 95% Confidence intervals for PUMS estimates of workforce participation rate by ethnicity and gender

	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
Men	74.78% - 75.16%	67.19% - 67.51%	68.84% - 69.52%	59.09% - 60.00%	55.47% - 59.01%	66.50% - 70.64%
Women	57.78% - 58.23%	55.42% - 55.79%	57.50% - 58.13%	58.14% - 59.15%	48.88% - 52.79%	61.63% - 65.84%

### 95% Confidence intervals for PUMS estimates of median wage by ethnicity and gender

	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
Men	\$28658 - \$29136	\$58938 - \$59415	\$49373 - \$51003	\$37918 - \$39141	\$33614 - \$37844	\$35768 - \$39987
Women	\$22452 - \$22917	\$39577 - \$39820	\$38834 - \$39418	\$32552 - \$33962	\$25474 - \$29411	\$28438 - \$32599

### 95% Confidence intervals for PUMS estimates of occupations by ethnicity for men

OCCUPATION	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
Architecture and Engineering	1.07% - 1.18%	3.76% - 3.92%	6.64% - 7.04%	1.35% - 1.75%	1.4% - 3.32%	1.16% - 2.42%
Arts, Design, Entertainment, Sports, and Media	1.4% - 1.54%	4.69% - 4.9%	2.27% - 2.53%	3.15% - 3.7%	1.43% - 2.98%	0.64% - 1.82%
Building and Grounds Cleaning and Maintenance	8.32% - 8.65%	2.43% - 2.59%	1.81% - 2.06%	4.31% - 4.91%	5.5% - 7.82%	3.22% - 5.39%
Business and Financial Operations	1.67% - 1.8%	5.26% - 5.44%	5.6% - 5.97%	3.48% - 4.1%	1.74% - 3.87%	2.21% - 4.56%
Community and Social Service	0.59% - 0.69%	0.99% - 1.08%	0.9% - 1.05%	2.04% - 2.44%	0.79% - 2.03%	0.43% - 1.37%
Computer and Mathematical	1.05% - 1.17%	4.65% - 4.83%	10.42% - 10.99%	2.43% - 2.91%	1.13% - 2.53%	1.73% - 3.35%
Construction and Extraction	13.49% - 13.91%	7.34% - 7.59%	2.31% - 2.56%	5% - 5.76%	9.75% - 12.48%	6.99% - 10.43%
Education, Training, and Library	1.61% - 1.75%	4.22% - 4.39%	2.75% - 3%	3.48% - 4.12%	1.65% - 3.17%	0.94% - 2.73%
Farming, Fishing, and Forestry	5.27% - 5.55%	0.46% - 0.53%	0.25% - 0.34%	0.17% - 0.3%	2.02% - 3.71%	-0.03% - 0.34%
Food Preparation and Serving	7.59% - 7.89%	3.39% - 3.57%	5.35% - 5.73%	3.59% - 4.27%	4.22% - 6.89%	3.35% - 5.52%
Healthcare Practitioners and Technical	1.02% - 1.14%	2.75% - 2.88%	5.24% - 5.61%	2.51% - 3.06%	0.5% - 1.44%	0.76% - 2.22%
Healthcare Support	0.59% - 0.68%	0.39% - 0.46%	1.18% - 1.38%	1.11% - 1.41%	0.29% - 1.05%	0.44% - 1.4%
Installation, Maintenance, and Repair	5.51% - 5.82%	4.82% - 5.05%	3.28% - 3.55%	3.53% - 4.31%	4.68% - 6.92%	5.84% - 8.75%
Legal	0.29% - 0.35%	1.87% - 1.98%	0.65% - 0.77%	0.57% - 0.87%	0.04% - 0.52%	0.01% - 0.47%
Life, Physical, and Social Science	0.29% - 0.36%	1.24% - 1.35%	1.48% - 1.7%	0.32% - 0.52%	0.29% - 1.09%	0.17% - 1.06%
Management	5.13% - 5.38%	15.54% - 15.86%	11.48% - 12%	7.19% - 8.06%	8.61% - 11.65%	4.94% - 7.53%
Military	0.26% - 0.33%	0.78% - 0.87%	0.22% - 0.31%	0.84% - 1.15%	1.04% - 2.7%	0.46% - 1.48%
Office and Administrative Support	7.44% - 7.73%	6.25% - 6.47%	8.62% - 9.14%	11.05% - 12.15%	6.3% - 9.24%	9.66% - 12.62%
Personal Care and Service	1.55% - 1.69%	1.84% - 1.99%	2.8% - 3.1%	3.52% - 4.14%	1.92% - 3.58%	2.68% - 4.6%
Production Occupations	9.45% - 9.77%	4.12% - 4.29%	6.17% - 6.6%	3.63% - 4.25%	5.52% - 8.25%	6.48% - 9.65%



## 95% Confidence intervals for PUMS estimates of occupations by ethnicity for women

OCCUPATION	LATINO	WHITE	ASIAN	BLACK	NATIVE AMERICAN	PACIFIC ISLANDER
Architecture and Engineering	0.26% - 0.33%	0.70% - 0.77%	1.68% - 1.94%	0.26% - 0.41%	0.22% - 0.81%	0.21% - 1.15%
Arts, Design, Entertainment, Sports, and Media	1.23% - 1.36%	4.10% - 4.34%	2.32% - 2.54%	1.41% - 1.77%	1.41% - 3.21%	0.94% - 2.07%
Building and Grounds Cleaning and Maintenance	8.53% - 8.87%	1.15% - 1.26%	1.25% - 1.44%	1.54% - 1.89%	2.46% - 4.23%	1.47% - 3.43%
Business and Financial Operations	3.00% - 3.21%	6.60% - 6.84%	8.63% - 9.05%	5.10% - 5.75%	3.16% - 5.04%	4.33% - 7.1%
Community and Social Service	1.77% - 1.93%	2.16% - 2.29%	1.15% - 1.35%	3.56% - 4.03%	1.61% - 2.97%	0.80% - 2.22%
Computer and Mathematical	0.46% - 0.55%	1.44% - 1.55%	4.27% - 4.6%	0.98% - 1.30%	0.27% - 1.31%	0.30% - 1.25%
Construction and Extraction	0.26% - 0.33%	0.24% - 0.29%	0.10% - 0.15%	0.12% - 0.26%	0.58% - 1.94%	0.00% - 0.90%
Education, Training, and Library	5.56% - 5.84%	10.96% - 11.28%	5.76% - 6.17%	6.93% - 7.76%	6.5% - 9.19%	2.05% - 3.99%
Farming, Fishing, and Forestry	3.6% - 3.84%	0.13% - 0.17%	0.17% - 0.25%	0.08% - 0.21%	0.23% - 0.90%	0.00% - 0.29%
Food Preparation and Serving	8.21% - 8.55%	5.12% - 5.36%	4.96% - 5.32%	3.72% - 4.26%	4.75% - 7.11%	3.86% - 6.90%
Healthcare Practitioners and Technical	3.24% - 3.42%	7.33% - 7.62%	11.58% - 12.05%	6.80% - 7.62%	3.92% - 6.16%	4.58% - 7.53%
Healthcare Support	4.01% - 4.29%	2.3% - 2.47%	3.36% - 3.69%	4.53% - 5.20%	2.37% - 4.29%	4.17% - 7.17%
Installation, Maintenance, and Repair	0.21% - 0.26%	0.21% - 0.27%	0.17% - 0.25%	0.28% - 0.45%	0.14% - 1.20%	0.03% - 0.76%
Legal	0.61% - 0.71%	1.70% - 1.84%	1.00% - 1.17%	0.96% - 1.30%	0.15% - 1.34%	0.19% - 1.19%
Life, Physical, and Social Science	0.32% - 0.38%	1.31% - 1.43%	1.67% - 1.88%	0.30% - 0.50%	0.47% - 1.59%	0.00% - 0.39%
Management	4.67% - 4.9%	11.05% - 11.32%	8.41% - 8.88%	7.26% - 8.09%	7.22% - 9.91%	5.40% - 8.39%
Military	0.03% - 0.06%	0.08% - 0.11%	0.01% - 0.04%	0.16% - 0.32%	0.02% - 0.51%	0.00% - 0.23%
Office and Administrative Support	19.05% - 19.52%	19.45% - 19.83%	15.67% - 16.22%	22.02% - 23.32%	20.67% - 24.63%	23.84% - 28.39%
Personal Care and Service	8.34% - 8.67%	6.84% - 7.13%	8.85% - 9.36%	10.27% - 11.30%	8.19% - 11.27%	11.19% - 15.17%
Production Occupations	6.24% - 6.53%	1.29% - 1.42%	4.37% - 4.71%	1.32% - 1.68%	1.35% - 3.17%	2.14% - 4.47%