

**10<sup>th</sup>**  
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economic summit

**LOS ANGELES COUNTY**  
2019 ECONOMIC REPORT

## COUNTY ECONOMIC REPORTS

# LOS ANGELES

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# TABLE OF CONTENTS

Executive Summary	ii
A. Economic Environment	1
B. Industry Outlook	3
C. Occupations	6
D. Income and Poverty	10
E. Educational Attainment	12
F. Housing Market	14

# Executive Summary

Los Angeles is a region of unrivaled diversity and opportunity which is home to over 10 million residents, forming a labor force of over 4.5 million. Los Angeles remains a beacon of creativity and economic dynamism, although it now faces substantial challenges in the form of a dramatic housing shortage and substantial inequality.

## Economic Overview and Outlook

The September unemployment rate in Los Angeles County was 4.5% (not seasonally adjusted), significantly below its July 2010 peak of 13.2% and has largely leveled off. Nonfarm employment in September 2019 totaled over 4.5 million adding nearly 70,000 jobs over the year for an annual growth rate of 1.1%. The bulk of major industry sectors experienced growth in employment over the year.

County employment is projected to grow at an average annual rate of 0.9% over the next five years, adding 202,000 jobs across a range of industries (Exhibit ES-1).

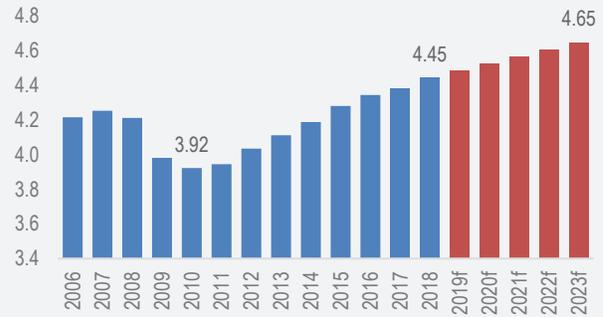
Wage growth has strengthened sizably on the back of the excellent labor market, and, although there are major risks and uncertainty on the horizon, economic growth should continue to improve employment and wages for the majority of residents.

## Leading Industries

Most industries will add jobs over the next five years, but overall, the industries with the best growth opportunities in terms of employment and wage growth will be:

- ▶ *Health Services*, which is estimated to grow at 9.6% over the next five years and add 66,000 jobs, driven by an aging population and increased access.
- ▶ *Construction* is projected to add around 19,000 jobs over the next five years, as the expansion drives regional development.
- ▶ *Information* is projected to add 13,000 jobs over the next five years driven by continued technological adoption across the economy.
- ▶ *Transportation and Warehousing* is projected to add almost 22,000 jobs over the next five years, driven by growth in logistics.

**Exhibit ES-1**  
Nonfarm Employment in Los Angeles County (millions of jobs)



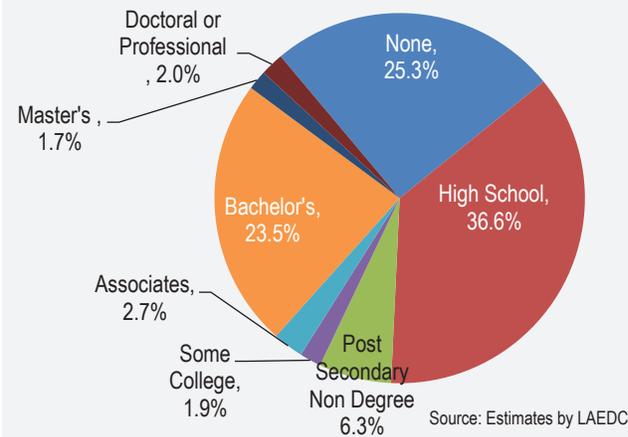
Source: CA EDD; forecast by LAEDC

These industries are major growth opportunities, not just because they are adding large number of jobs, but because they are likely to see sustained growth and increases in wages in the future. Many other industries such as accommodation and food services are adding as many or more jobs but suffer from low wages and employment precarity.

## Occupational Outlook

While jobs are being added across industries, the highest number of overall new jobs will be found in those occupations that require a high school diploma or less, and which pay less than the County’s median annual wage of \$40,970. Roughly one quarter of projected new jobs

**Exhibit ES-2**  
Entry Level Education and Experience Requirements All Jobs 2018-2023



Source: Estimates by LAEDC

over the next five years require workers without a high school diploma. Another 37% will require workers with a high school diploma (Exhibit ES-2).

Those with a graduate or professional degree earn an annual wage premium of around \$57,000 over those with less than a high school education (Exhibit ES-3). The strong correlation between educational attainment and earnings signals challenges ahead as those with less than a high school degree face limited jobs prospects, are more likely to be unemployed, and are less likely to be able to support their households.

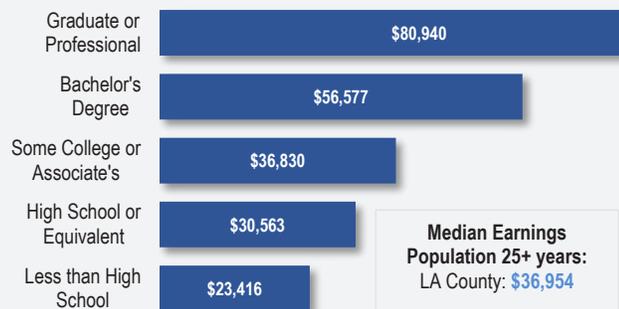
## Income and Poverty

Household incomes have increased steadily for the last 25 years, from \$34,965 in 1990 to \$68,093 in 2018. Inflation-adjusted household incomes had been falling, but the substantial increase in household earnings in recent years has reversed the trend, with real incomes in 2018 approaching their 1990 peak. Households in Los Angeles County have failed to achieve the same real incomes as in the 1990s primarily due to excessive regional inflation in a few areas, predominantly housing and medical services (Exhibit ES-4).

**Exhibit ES-3**

### Median Earnings and Educational Attainment 2018

Population 25 years and older



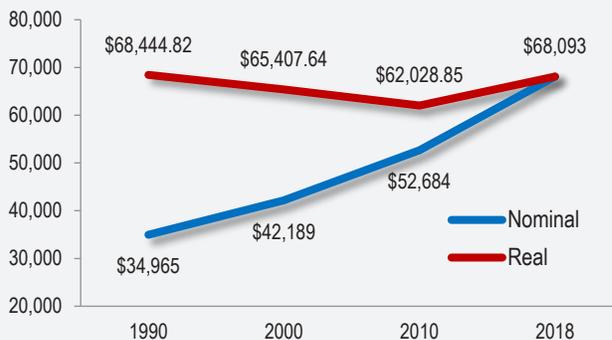
Source: 2018 ACS 1-yr estimates

Economic expansion is also causing poverty rates to keep falling so we have seen a steady year-over-year decline in individual poverty rates. The individual poverty rate is now at 14.1%, a substantial decrease from the peak of 19.1% reached in 2012 and has made particularly large improvement in the past five years (Exhibit ES-5). As with earnings, there is a strong correlation between lower levels of educational attainment and higher rates of poverty.

Over one-fifth of adults in the county with less than a high school education are in poverty. In contrast, those with a BA or higher have a poverty rate of only 5.8% (Exhibit ES-6).

**Exhibit ES-4**

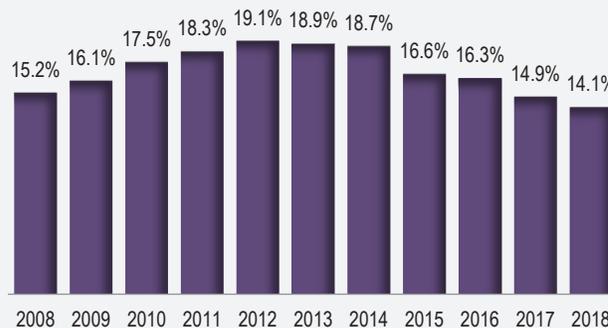
### Median Household Income Nominal and \$2018



Source: ACS 2018 1-year estimates; BLS

**Exhibit ES-5**

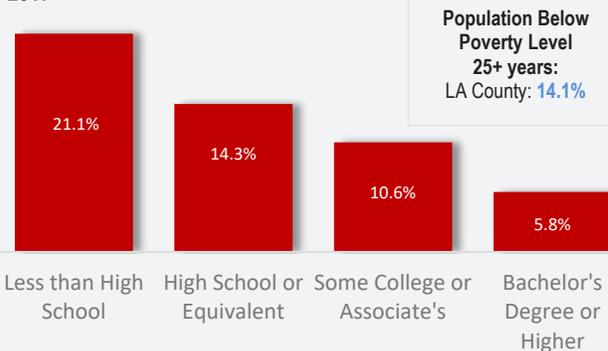
### Individual Poverty Rates 2008 to 2018 Los Angeles County



Source: 2018 ACS 1-yr estimates

**Exhibit ES-6**

### Poverty Rates and Educational Attainment 2017



Source: 2018 ACS 1-yr estimates; BLS

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## A. Economic Environment

Los Angeles County is by far the most populous county in the United States, with a population of roughly 10 million people, and a labor force of around 4.5 million. Being such a massive region, Los Angeles County is home to diverse economy whose long-time strength in industries such as entertainment and trade continue to anchor the regional labor market.

Although the strength of the regional economy continues unabated, there are a number of risks to continued growth and prosperity. Chief among these, California’s housing crisis continues to weigh on economic growth and equitable opportunities for all the county’s residents. In addition, substantial declines in international trade flows pose a major danger to an economy that is heavily exposed to trade via the local ports and transportation and warehousing sector.

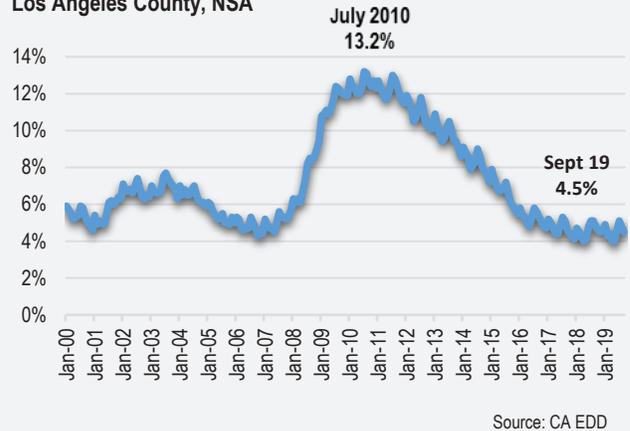
### Current Employment Overview

Unemployment in Los Angeles County continues to decline, even as labor force participation increases. However, this trend has slowed, and, in spite of a national unemployment rate of 3.5%, the county unemployment rate appears to have leveled off around 4.5%. Exhibit A-1 displays the historical unemployment rate for the county.

The most recent employment data suggest that the county has added roughly 70,000 jobs year-over-year for a relatively substantial 1.12% increase between September 2018 and September 2019. Most industry sectors expanded employment in the past year, with 14 out of 19 sectors posting employment growth, with the remaining 5 declining.

Nonfarm wage and salary employment rose to 4.6 million, maintaining the substantial growth seen since the economy bottomed out in the beginning of the decade. In general, we should expect this to continue all else equal, as the nation’s domestic economy continues to suggest robust strengthening as well.

**Exhibit A-1**  
Civilian Unemployment Rate  
Los Angeles County, NSA



Source: CA EDD

**Exhibit A-2**  
Industry Employment in Los Angeles County

NAICS	Industry Description	Sep 2019	% Δ from Sep 2018
62	Health Care and Social Assistance	721,800	3.9%
92	Government	565,800	-2.7%
72	Accommodation and Food Services	450,700	2.1%
44-45	Retail Trade	416,300	-1.2%
31-33	Manufacturing	344,000	0.2%
54	Professional and Technical Services	295,700	1.5%
56	Administrative and Waste Services	280,700	2.2%
42	Wholesale Trade	223,500	0.4%
51	Information	214,900	-0.4%
48-49	Transportation and Warehousing	197,400	2.0%
81	Other Services	161,900	1.6%
23	Construction	158,300	7.2%
52	Finance and Insurance	134,900	-1.0%
61	Educational Services	133,800	2.7%
71	Arts, Entertainment and Recreation	96,800	3.6%
53	Real Estate/Rental/Leasing	86,900	0.9%
55	Mgmt. of Co's/Enterprises	59,800	0.7%
22	Utilities	11,600	0.0%
21	Mining and Logging	1,900	-5.0%
<b>Total Nonfarm Employment</b>		<b>4,556,700</b>	<b>1.12%</b>

Source: CA EDD

While Exhibit A-2 displays the year-over-year percentage change in employment by industry, the actual number of jobs added or lost by industry sector is shown in Exhibit A-3.

In September, the industries with the largest year-over-year increase in jobs were those that provided services to the regional population. Healthcare, accommodation and food services, and construction saw the largest gains. In contrast, retail trade and government saw substantial declines.

*Health care and social assistance* is the single largest source of employment in the county, and continues to see substantial growth, with an increase in workers of nearly 4% just in the last year. This was an increase of almost 27,000 jobs over September 2018, and this trend should continue as demand for health care services continues to skyrocket.

*Construction* employment increased by a staggering 7.2% over the year in September, adding 10,700 jobs over the year. This sector’s recent growth has been driven by continued direct government investment, in the form of transit expansions as well as private sector investment in redevelopment as demand for housing and office space skyrockets.

*Accommodation and Food Services* added 9,200 jobs year-over-year, or a growth rate of 2.1%. Strong employment and wage growth in the region have heavily increased demand for local food and services, as more people are confident in their economic circumstances and eat out more. In addition, continued increased in tourism, with Los Angeles seeing record numbers of tourists, drove demand for accommodations in the region.

Other industries that posted more moderate job gains were many of the more professional and creative industries such as Professional and Technical Services, Educational Services and Arts, Entertainment and Recreation.

Conversely, there were several industries that posted year-over-year declines in employment.

Particularly concerning is that the key regional industry of *Information* posted a decline of just short of 1,000 workers. Although the numeric decline is small, Information is a crucial industry whose strength is a backbone of economic stability for the region. In Los Angeles County, this category is disproportionately highly represented in the motion picture and sound recording industries.

**Exhibit A-3**  
**Employment Change by Industry Sector**  
**Los Angeles County, September 2019**  
 (Y-Y Numerical Change, thousands)



Sources: BLS, CES; LAEDC

*Retail* posted a sizable year-over-year decline of 4,900. Part of this is the ongoing shift to the ecommerce portion of the retail industry, which employs fewer people for the same output, but it is also likely that continued economic strength has shifted workers out of retail and into other opportunities.

*Government* posted a relatively dramatic decline in employment in the region. Some of this may be a true decline, but there is also likely a short-term knock-on effect from the federal shutdown earlier in the year.

## B. Industry Outlook

### Employment Forecast

Since the economy bottomed out in 2010, Los Angeles County has been adding on average 66,000 jobs a year, a robust rate of employment growth that shows no signs of stopping.

Between 2018 and 2023, the economy is expected to add new jobs in nonfarm employment at a rate of on average 40,000 a year. This is slightly slower than in the recent past but is still a substantial rate of growth for the economy. This growth will put the region at an estimated 4.65 million employed in the year 2023.

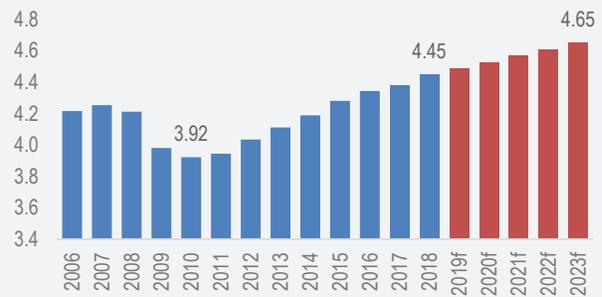
On major barrier to this growth continuing in the long term has been the dramatic declines in the population growth rate for both the county, and California as a whole. California only grew by roughly 0.4% in 2018, and Los Angeles County posted virtually no population change, declining by roughly 1,000 persons (0.01%).

In the short term, some of this is compensated by workers moving to neighboring counties and commuting in for work, but this is neither efficient nor optimal for the region. If this trend continues, we should expect it to be difficult for the economy reaching its growth potential, and we may fall into recession purely because of the potential for a shrinking population.

Other more near-term risks include dramatically slowing global trade, which could easily weaken the Los Angeles County economy, for which the regional ports are a major economic driver. Worrying economic data from East Asia should be ringing alarm bells to any industry that relies too heavily on container traffic flowing through the ports.

In addition the, a major barrier to employment growth in many industries is the impossibility of paying a sufficient wage to cover the housing costs caused by the region’s distorted housing market. No matter how successful an industry is, there is a huge impact on its ability to hire and retain workers if a disproportionate amount of their income goes towards housing. If this projected employment growth is to continue, additional housing will have to be produced.

**Exhibit B-1**  
**Nonfarm Employment in Los Angeles County**  
 (millions of jobs)



Source: CA EDD; forecast by LAEDC

**Exhibit B-2**  
**Industry Employment Growth 2018-2023**  
**Los Angeles County**

	Average Annual % Growth	Employment Δ (Thousands)
<b>Total Nonfarm</b>	<b>0.9%</b>	<b>202.8</b>
Health Care and Social Assistance	1.8%	65.8
Accommodation and Food Services	1.2%	26.1
Government	0.8%	22.9
Transportation and Warehousing	2.3%	22.3
Professional and Technical Services	1.4%	21.0
Construction	2.5%	19.2
Information	1.3%	13.3
Administrative and Waste Services	0.9%	12.8
Educational Services (Private)	0.9%	4.9
Arts, Entertainment and Recreation	0.8%	3.6
Real Estate/Rental/Leasing	0.6%	2.5
Mgmt. of Co's/Enterprises	0.2%	0.5
Mining and Logging	-0.4%	0.0
Utilities	-0.2%	-0.1
Wholesale Trade	0.0%	-0.5
Other Services	-0.2%	-1.7
Finance and Insurance	-0.3%	-1.8
Manufacturing	-0.1%	-2.1
Retail Trade	-0.3%	-5.8

Sources: BLS, QCEW; LAEDC

## Key Growth Industries

There are six key growth industries whose projected growth rates exceed those of the economy as a whole.

### ► *Health Care*

Healthcare is by far the largest source of employment for the county, and the industry is only expected to grow more as the population ages. In addition, increasing efforts to expand healthcare access to more people, both locally and nationally, should induce more demand for these services. One value of the health care industry expansion is that it offers a huge variety of occupational opportunities at various educational and experience levels, from the associate's level to the doctoral. The industry is expected to grow at an annual growth rate of 1.8% over the next 5 years and add roughly 66,000 jobs.

### ► *Construction*

Los Angeles County's redevelopment efforts are perhaps most visible in the region's dramatic transit expansion efforts, but there is also substantial private sector investment in redevelopment particularly near the downtown core. If the region can enact substantial zoning and fee reforms to enable more infill development there is potential for a dramatic boom in the industry, which is already expected to experience strong growth. This potential is not to be brushed aside as the industry can be a strong source of economic opportunity for those who lack advanced education. Construction is expected to grow at an annual rate of 2.5% over the next 5 years, for an additional 19,000 jobs.

### ► *Information*

The information sector is home to the region's key motion picture industry, which remains an important anchor of economic strength in the region. The dramatic increase in competition amongst different streaming and traditional cable companies means there is substantial demand for primary motion picture production and content creation. In addition, the burgeoning tech industry in Los Angeles is benefitting from companies choosing to relocate some of their employment away from pricy Northern California, and if the region can provide sufficient housing and transit options to entice more of this relocation, this trend could easily expand. The information sector is projected to grow at a rate of 1.3% per year over the next 5 years, adding 13,000 jobs by 2023.

### ► *Transportation and Warehousing*

Transportation and goods movement will continue to be an important economic driver of Los Angeles County. Trade from the port, although highly uncertain in the short term, should still provide a stable source of employment and economic activity for the region. In addition, burgeoning subsectors such as advanced transportation, with dramatic adoption of electric vehicles and alternative transportation options will provide the opportunity for substantial new growth. Much like construction, this industry provides a variety of economic opportunities for those without bachelor's degrees and will be an important source of employment for this portion of the population. This sector is projected to grow at roughly 2.3% through 2023, adding 22,000 jobs in the intervening period.

### ► *Professional and Technical Services*

Professional services are already a well-established industry sector, with nearly 300,000 employees in the county as of September 2019. This industry is a crucial employment opportunity for the most highly educated portions of the workforce, with advanced knowledge opportunities in such disparate fields as legal, engineering and management consulting. These industries increasingly rely on advanced technical and computational skills, and the growth opportunities here are consequently important sources of high-wage employment growth. As other industries undergo rapid changes there will only be more demand for the outside expertise represented by this sector. Professional services is expected to grow at an annualized rate of 1.4% over the next 5 years, adding 21,000 employees in that period.

### ► *Accommodation and Food Services*

Although accommodation and food services may bring to mind low wage jobs that can be replaced in the future, it remains an important sector in terms of raw employment provided and this is likely to continue in the future. As of September 2019, there were 450,000 people employed in the industry in Los Angeles county. The image of an actor waiting tables while waiting for their big break may be a stereotype, but it is true that the combination of flexible hours and minimal educational requirements make this sector extremely important in terms of employment opportunities for broad swathes of the population that cannot work a typical 9 to 5 schedule, and those who lack the substantial education required to take advantage of other opportunities. The industry is projected to grow at an annual rate 1.2%, adding 26,000 jobs by 2023.

## Industry Wages

Wages across industry sectors vary significantly. The average wage for payroll employment in Los Angeles County in 2018 was \$64,921, up approximately \$2,000 from the year earlier. Exhibit B-3 provides the average wage for each industry sector.

As might be expected from recent trends, there is a strong bifurcation between the wages of those industries that rely heavily on highly skilled and educated knowledge and creative workers and those that use predominantly unskilled and less educated workers. Information, finance, management, and professional services all feature average wages of over \$100,000 per year. These industries rely on an educated, experienced, workforce to leverage technical expertise, and consequently pay remarkably high wages. In addition, the entertainment sector pays similarly high wages, where the industry pays a huge premium for creativity and talent, particularly in Los Angeles County.

On the flip side of this bifurcation is that, although wages have been rising, those industries that feature low-skill workers and operate in the more traditional production and trade spaces, average salaries that are significantly lower. Industries such as wholesale trade, construction, transportation and warehousing and the various service industries all rely more on manual, repetitive labor and thus do not command the wage premiums of their more highly skilled fellows.

### Exhibit B-3

#### Average Annual Wage by Industry 2018 (Los Angeles County)

	Average Annual Wage
<b>Total Payroll Employment</b>	<b>\$64,921</b>
Information	\$136,841
Finance and Insurance	\$129,374
Utilities	\$122,373
Mgmt. of Co's/Enterprises	\$118,403
Arts, Entertainment and Recreation	\$108,961
Professional and Technical Services	\$108,249
Mining and Logging	\$100,501
Manufacturing	\$74,688
Real Estate/Rental/Leasing	\$68,686
Wholesale Trade	\$65,636
Construction	\$66,798
Transportation and Warehousing	\$65,646
Educational Services	\$61,223
Health Care and Social Assistance	\$45,219
Other Services	\$39,762
Administrative and Waste Services	\$44,195
<b>Government Employment</b>	<b>\$73,837</b>

Sources: CA EDD; LAEDC

## C. Occupations

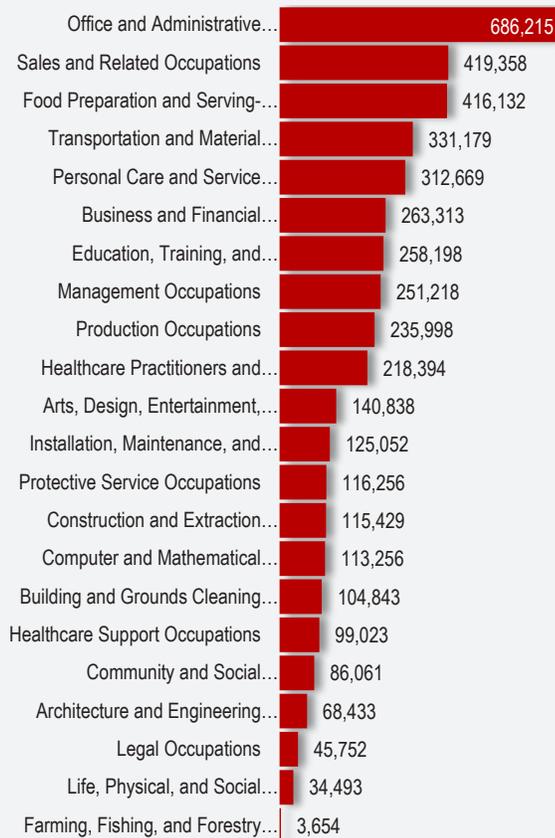
The composition of the actual work performed within industries is analyzed through occupational data.

### Current Occupational Profile

Occupations are classified using the Standard Occupational Classification (SOC) system developed by the Bureau of Labor Statistics. This system classifies all workers into one of 840 detailed occupations with similar job duties, skill, education, and training. These detailed occupations are aggregated into 23 major groups, which include broad descriptive. This system has just undergone a substantial revision for the first time in 8 years and will feature several new and different detailed occupations moving forward.

The occupational profile of Los Angeles County in 2018 is shown in Exhibit C-1.

**Exhibit C-1**  
Occupational Employment by Major Group  
Los Angeles County, First Quarter 2018

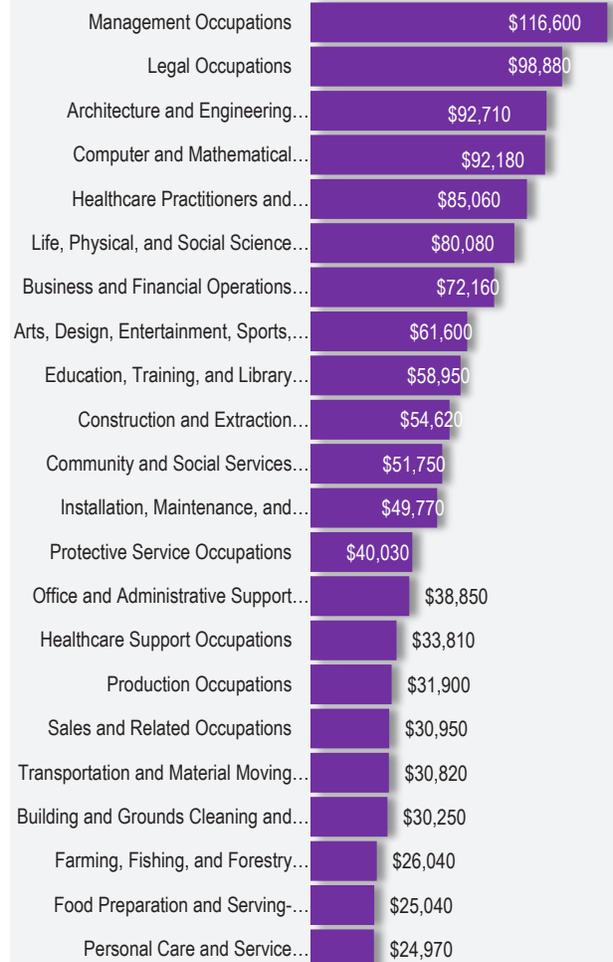


Source: BLS OES, LAEDC Estimates

The majority of workers in the largest occupational groups can be found in generic office and sales jobs, with nearly 700,000 employed in office and administrative occupations. Behind these jobs, there is substantial employment in population-serving occupations such as food preparation and personal care, as well as many people employed in transportation jobs.

Exhibit C-2 presents the annual median wages associated with each major occupational group in Los Angeles County in the first quarter of 2018. The annual median wage across all occupations was \$40,970.

**Exhibit C-2**  
Median Annual Wages of Major Occupation Groups  
Los Angeles County, First Quarter 2018



Source: CA EDD

As with industries, there is a great deal of variation between the wages paid to different occupational groups. Unsurprisingly, the highest wages can be found in management occupations, with substantial wages paid to those in complex knowledge occupations as well. Groups such as legal, architecture, computer related, and health care all have median salaries approaching \$100,000 a year.

In contrast, occupational groups related to basic services and physical labor related occupations have low wages, with some of the lowest wages reserved for those in food preparation and personal care related occupations.

## Occupational Projections

The growth of industries in the region will determine demand for specific occupations, as the shifting demands within and between industries call for different skill sets or even entirely new occupations altogether. So, while it is important to look at the different projections for various occupations, it is impossible to totally separate them from the broader industrial structure of the regional economy.

Projected new jobs are calculated by applying the industry occupational composition to the detailed industry employment forecast. In this analysis, the base employment year is 2018, the most recent year for which complete annual employment data is available.

Major growth is expected to be seen in virtually all occupational groups. A few key sources include the healthcare occupations, which are expected to add roughly 20,000 jobs together as well as the various business and management occupations of which both groups are expected to add near 15,000 new jobs over the next 5 years.

For low-skilled workers, important opportunities will be found in the growth of construction occupations as well as personal care and service occupations which are both expected to undergo dramatic growth.

Production occupations are expected to undergo substantial contraction, with job losses being driven by projections of decline in manufacturing, their primary industry. Projected new jobs by major occupational group aggregated across industries in Los Angeles County are presented in Exhibit C-3.

Detailed occupations are differentiated according to job skills, abilities and work experience required. They are not generally industry specific but are common to several

### Exhibit C-3

#### Occupational Growth in Los Angeles County 2018-2023f

SOC	Occupational Group	New Jobs	% Growth
39-0000	Personal care and service	27,157	8.50%
53-0000	Transportation/material moving	20,825	6.30%
25-0000	Education, training, and library	19,314	7.50%
35-0000	Food preparation and serving	18,810	4.50%
11-0000	Management occupations	15,415	6.10%
13-0000	Business and financial	14,826	5.60%
43-0000	Office and administrative	14,348	2.10%
29-0000	Healthcare practitioners	13,462	6.20%
47-0000	Construction and extraction	13,272	11.50%
33-0000	Protective services	12,619	10.90%
15-0000	Computer and mathematical	10,815	9.50%
41-0000	Sales and related	8,068	1.90%
31-0000	Healthcare support	7,278	7.30%
37-0000	Building/grounds maintenance	6,735	6.40%
21-0000	Community and social services	6,346	7.40%
17-0000	Architecture and engineering	4,091	6.00%
49-0000	Installation, maint / repair	3,679	2.90%
19-0000	Life, physical, social science	2,704	7.80%
27-0000	Arts, entertainment, sports	1,868	1.30%
23-0000	Legal occupations	1,181	2.60%
45-0000	Farming, fishing, and forestry	17	0.50%
51-0000	Production	-10,040	-4.30%
<b>Total</b>		<b>202,790</b>	<b>4.6%</b>

industries. For example, retail salespersons are employed in a wide range of industries.

Exhibit C-4 presents the top 20 detailed occupations by projected job openings (new jobs and replacement jobs) between 2018 and 2023. These twenty occupations will account for approximately 40% of all new jobs across all occupations expected during this period.

The highest number of overall openings will be found in the largest occupational groups: personal care aides from the personal care and service occupational group; the combination of food preparation and serving workers and waiters and waitresses in the food preparation and serving related group; and registered nurses from the healthcare practitioners and technical occupations group.

**Exhibit C-4**

**Largest Growth Occupations, 2018-2023**

SOC	Occupation	New Jobs	Replacement	Total
39-9021	Personal Care Aides	19,272	27,525	46,796
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food Laborers and Freight, Stock, and Material Movers, Hand	7,328	15,607	22,935
53-7062	Registered Nurses	7,139	10,435	17,573
29-1141	Waiters and Waitresses	5,860	3,340	9,201
35-3031	Security Guards	4,508	12,392	16,900
33-9032	Software Developers, Applications	3,497	4,833	8,330
15-1132	General and Operations Managers	3,183	2,018	5,201
11-1021	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	3,092	4,903	7,995
37-2011	Cooks, Restaurant	2,931	5,895	8,826
35-2014	Sales Representatives, Services, All Other	2,922	4,375	7,297
41-3099	Heavy and Tractor-Trailer Truck Drivers	2,553	3,717	6,270
53-3032	Office Clerks, General	2,366	3,520	5,886
43-9061	Medical Assistants	2,249	5,962	8,212
31-9092	Market Research Analysts and Marketing Specialists	2,198	2,249	4,447
13-1161	Light Truck or Delivery Services Drivers	2,189	2,511	4,700
53-3033	Business Operations Specialists, All Other	2,146	3,030	5,176
13-1199	Stock Clerks and Order Fillers	2,115	2,382	4,497
43-5081	Accountants and Auditors	2,034	6,494	8,528
13-2011	Customer Service Representatives	1,948	2,927	4,875
43-4051		1,900	5,999	7,899

Other occupations that will provide a large number of openings are laborers and security guards.

## Education and Skills Requirements

The education and work experience needed for an entry level position in each of the top 20 growth occupations is shown in Exhibit C-5. Additionally, the level of the on-the-job training required to gain proficiency for each occupation is also shown.

Many occupations in the exhibit require relatively little education or experience. The median annual wage shown for each occupation reflects the degree of preparation and

**Exhibit C-5**

**Average Wage and Entry Level Requirements for Top 20 Detailed Occupations 2018-2023**

SOC	Detailed Occupation	Annual Mean Wage	Entry Level Needs		
			Education	Work Exp	OJT
39-9021	Personal Care Aides	\$27,960	High school	None	Short-term
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food Laborers and Freight, Stock, and Material Movers, Hand	25,390	None	None	Short-term
53-7062	Registered Nurses	31,450	None	None	Short-term
29-1141	Waiters and Waitresses	99,930	Bachelor's	None	None
35-3031	Security Guards	28,490	None	None	Short-term
33-9032	Software Developers, Applications	33,460	High school	None	Short-term
15-1132	General and Operations Managers	114,900	Bachelor's	None	None
11-1021	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	141,460	Bachelor's	=5 years	None
37-2011	Cooks, Restaurant	33,390	None	None	Short-term
35-2014	Sales Representatives, Services, All Other	29,480	None	<5 years	Moderate term
41-3099	Heavy and Tractor-Trailer Truck Drivers	64,820	High school	None	Moderate term
53-3032	Office Clerks, General	47,400	Postsecondary non-degree	None	Short-term
43-9061	Medical Assistants	37,030	High school	None	Short-term
31-9092	Market Research Analysts and Marketing Specialists	36,920	Postsecondary non-degree	None	None
13-1161	Light Truck or Delivery Services Drivers	71,460	Bachelor's	None	None
53-3033	Business Operations Specialists, All Other	39,450	High school	None	Short-term
13-1199	Stock Clerks and Order Fillers	80,250	Bachelor's	None	None
43-5081	Accountants and Auditors	30,780	High school	None	Short-term
13-2011	Customer Service Representatives	84,650	Bachelor's	None	None
43-4051		40,540	High school	None	Short-term

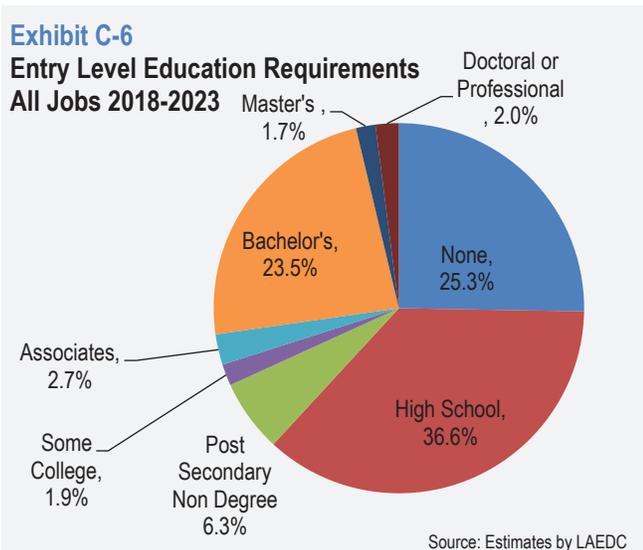
Source: CA EDD

skill levels needed; many are below the median wage for workers in the county, with notable exceptions being the highly paid opportunities for registered nurses, software developers and general and operations managers.

Exhibit C-6 presents the entry level education and training requirements across all new jobs in the region.

Roughly one quarter of new jobs created in the next 5 years will have no educational requirements. A little over one third will require workers with a high school diploma (or equivalent). So roughly 60% of all new jobs will be available for those with relatively limited educational attainment.

Of the remaining projected new jobs, 23.5% will be suitable for those with a bachelor’s degree, 2.7% for workers with an associate degree and 6.3% for certified post-secondary candidates.



## D. Income and Poverty

Median household income in Los Angeles County is shown in Exhibit D-1. Two series are presented: nominal median household income and household income adjusted for inflation (shown in 2018 dollars).

Nominal household income has increased steadily since 1990, with an annual average growth of 1.9% from 1990 to 2000, and 2.2% from 2000 to 2010. However, wage growth has accelerated significantly in recent years, making up for lackluster growth in the aftermath of the financial crisis. Between 2010 and 2018 median household income has increased at a rate of roughly 3.2% year in nominal terms.

Adjusting median household income for inflation gives us a direct comparison in real 2018 dollars. From this, it is clear that local incomes were trending downwards in real terms between 1990 and 2010. This trend has finally reversed, with particularly strong wage growth in the past 3 years driving real household incomes back nearly to where they were in 1990. The fact that real household income has not exceeded its 1990 peak can be attributed largely to excessive price inflation in housing and medical services.

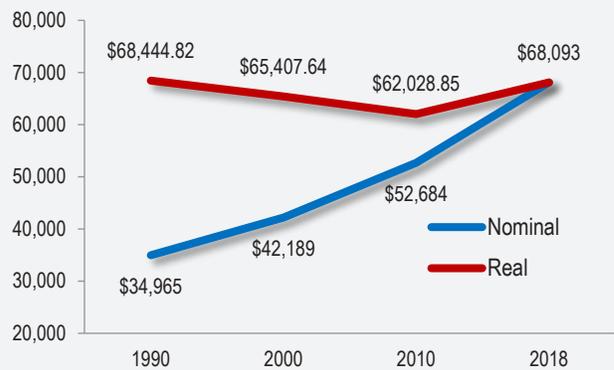
Per capita income in Los Angeles County is shown in Exhibit D-2, again in both nominal terms and adjusted for inflation (2018 dollars).

Per capita income in Los Angeles County is estimated at \$34,115 in 2018. As with median household income, nominal per capita income has seen decadal growth on the order of 2.5% per year from 1990 to 2000, 2.2% per year from 2000 to 2010 and 3.6% per year since 2010.

Real per capita income has also increased after a slow decline in previous years, rising a full 13% after bottoming out in 2010 in the depths of the economic crisis.

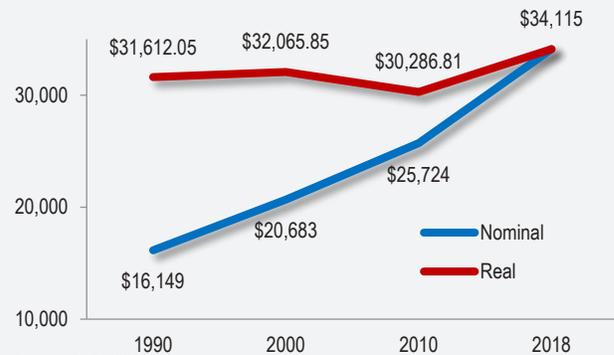
The distribution of household income is shown in Exhibit D-3. The median household income in 2018 was \$68,093. Fully 18.7% of households in the county earn less than \$25,000 dollars a year and over 30% earn less than \$40,000. As median incomes have been trending up in recent years, this means that fewer households are in these lower brackets than previously.

**Exhibit D-1**  
Median Household Income  
Nominal and \$2018



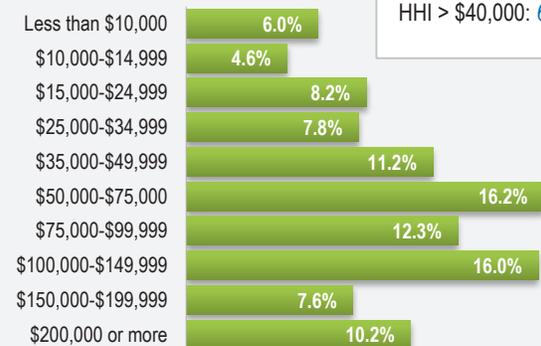
Source: ACS 2018 1-year estimates; BLS

**Exhibit D-2**  
Per Capita Income  
Nominal and \$2018



Source: ACS 2018 1-year estimates; BLS

**Exhibit D-3**  
Households by Income  
Los Angeles County 2018



Source: 2018 ACS 1-yr estimates

The U.S Census Bureau determines poverty by using an individual's or a family's pre-tax income and comparing it against a threshold of minimum cash needs. These thresholds are updated annually to account for changes in the prices of basic goods. In 2018, the poverty threshold for an individual 65 years of age or younger was \$13,064. For a family of four, the threshold was \$25,701. An individual or family with an income less than these amounts would be considered in poverty.

Exhibit D-4 shows the percentage of individuals in Los Angeles County living in poverty in 1990, 2000, 2010 and 2018. Using the federal poverty threshold, 14.1% of individuals in Los Angeles County were living in poverty in 2018. This rate increased between 1990 and 2000 but declined during the following decade.

Since the end of the Great Recession, poverty rates have continued to fall, dropping below their 2008 number in 2017. Annual rates since 2008 are shown in Exhibit D-5.

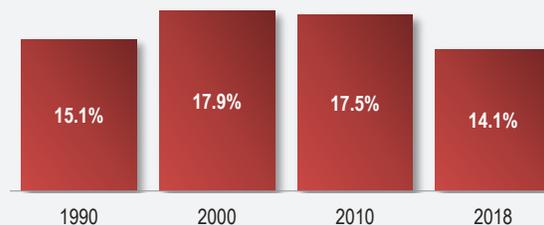
Poverty is highly correlated with unemployment, rising as unemployment rates rise, and falling after unemployment rates fall. Since unemployment rates in Los Angeles County have been on a downward trend since 2010, poverty rates have also been falling.

Although the poverty threshold is updated annually, it does not consider the wide variation of the cost of living across municipalities. Indeed, Los Angeles County is considered to have a very high cost of living, so the official poverty rate is likely to significantly understate the actual incidence of poverty in the county due in particular to exorbitant housing costs.

Of the households in poverty in Los Angeles in 2018, 27% were married couples with dependent children. An additional 36.5% were single mothers while 8.4% were families with children headed by single males. These and the remaining classifications of households experiencing poverty are presented in Exhibit D-6.

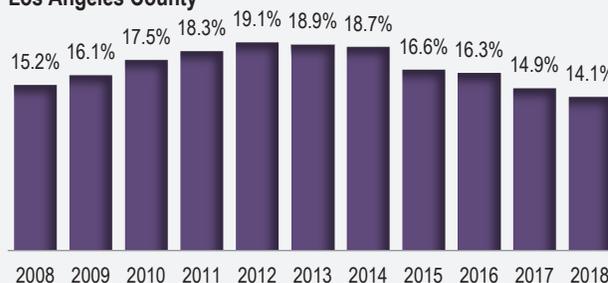
Almost three-fourths of families living under the federal poverty threshold have children. With children at home, single parents must earn enough to care for them. These parents face exacerbated challenges in affording housing, food, childcare and medical care, all of which have experienced significant inflation in recent years

**Exhibit D-4**  
Individual Poverty Rates by Decade  
Los Angeles County



Source: Census Bureau

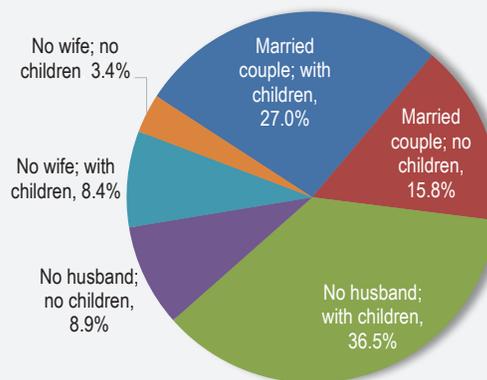
**Exhibit D-5**  
Individual Poverty Rates 2008 to 2018  
Los Angeles County



Source: 2018 ACS 1-yr estimates

**Exhibit D-6**  
Families and Poverty  
Los Angeles County 2018

*Income in the past 12 months below poverty level*



Source: 2018 ACS 1-year estimates

## E. Educational Attainment

The population of residents aged 25 years and older in Los Angeles County numbered just short of 7 million in 2018. This population is generally assumed to have reached their highest level of educational attainment, although additional credentials are still certainly possible. The educational attainment of this population is shown in Exhibit E-1.

With nearly 22% of the population lacking a high school diploma, the region is significantly less educated than the nation on average, where only 11.7% of the United States did not graduate high school. This is one major risk to the economy, as a large portion of Los Angeles County may lack the requisite skills and education level to build successful careers in an increasingly technical modern economy.

In contrast, 31.5% of the population has a bachelor's degree or higher, which is directly in line with the national average of 32.6%. This suggests that the Los Angeles County economy is significantly more bifurcated than country as a whole, making it a bastion of educational economic inequality.

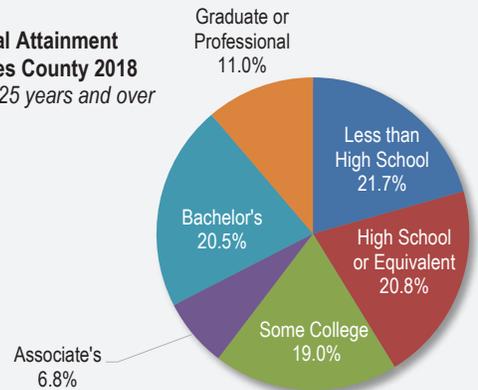
Fortunately, this difference in educational attainment is predominantly found among older adults, and younger generations show much higher levels of educational attainment across the board. Only 11.0% of those 25-34 do not have a high school degree, and fully 36.8% have a bachelor's degree or higher. The full breakdown of educational attainment by age may be found in Exhibit E-2

The increasingly knowledge-based economy demands high educated workers with substantial technical skills, which drives higher wages for those with higher education. This can be seen in the distribution of wages earned by educational attainment available in Exhibit E-3.

There is an obvious wage premium for each additional level of education completed. For instance, a worker with a graduate or professional degree earns more than \$40,000 a year more on average than the median worker county wide does. If we look at the gap between those with graduate degrees and those without high school degrees it is even more stark, with a gap of well over \$50,000 in annual median earnings.

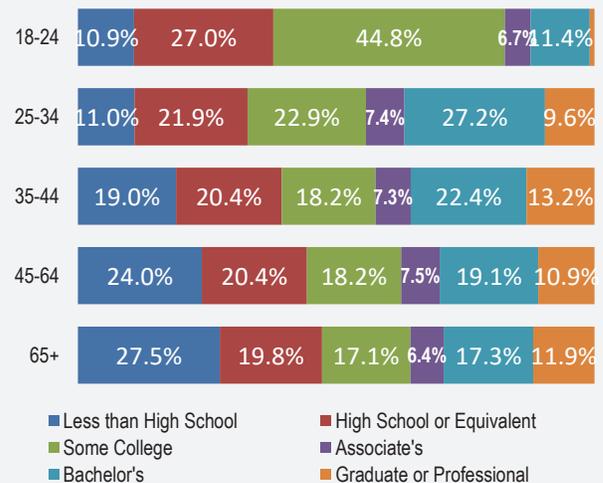
Since earnings from employment represent the most significant portion of all income, those that earn lower

**Exhibit E-1**  
Educational Attainment  
Los Angeles County 2018  
Population 25 years and over



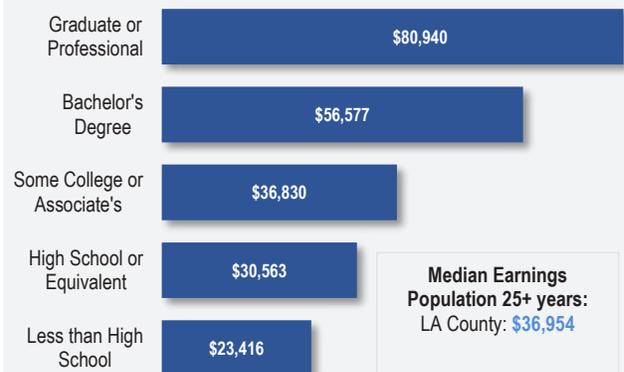
Source: 2018 ACS 1-year estimates

**Exhibit E-2**  
Educational Attainment by Age Group  
Los Angeles County 2018



Source: 2018 ACS 1-year estimates

**Exhibit E-3**  
Median Earnings and Educational Attainment 2018  
Population 25 years and older



Source: 2018 ACS 1-yr estimates

wages will experience higher rates of poverty. Also, those with lower levels of education are likely to find employment opportunities to be more limited. The relationship between educational attainment and unemployment and poverty is shown in Exhibit E-4.

Although unemployment levels are relatively low for all groups, with the gap between the most educated and least being only two percentage points there is a striking difference in the poverty levels of those with varying educational achievement.

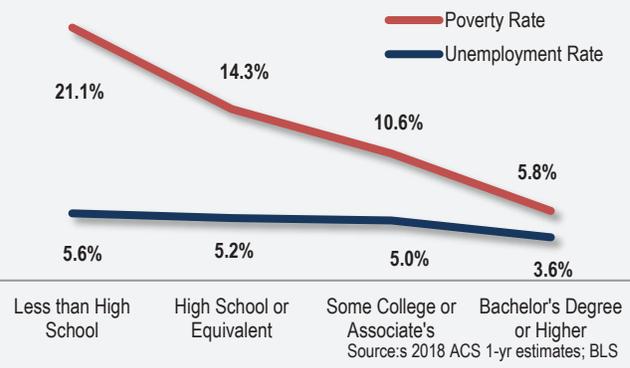
The gap between those with bachelor’s degrees and those without any formal education is nearly 15 percentage points. This suggests that, while almost anyone in the region can find work, without sufficient education it is difficult to find the good-paying jobs that are necessary to build financial stability. In particular, many jobs that do not require much education are part time and lack the benefits and hours to sufficiently raise workers out of poverty.

**Exhibit E-4**

**Unemployment and Poverty by Education**

**Los Angeles County, 2018**

*Population 25 to 64 years*



## F. Housing Market

The economic issues of both California and Los Angeles County continue to be dominated by the ongoing housing crisis, and a continued failure to address its underlying causes. The county saw a median sale price of over \$600,000 for homes in September 2019, and, although the pace of sales has slowed somewhat recently, there are no signs of prices decreasing absent a significant increase in supply.

### Housing Permits

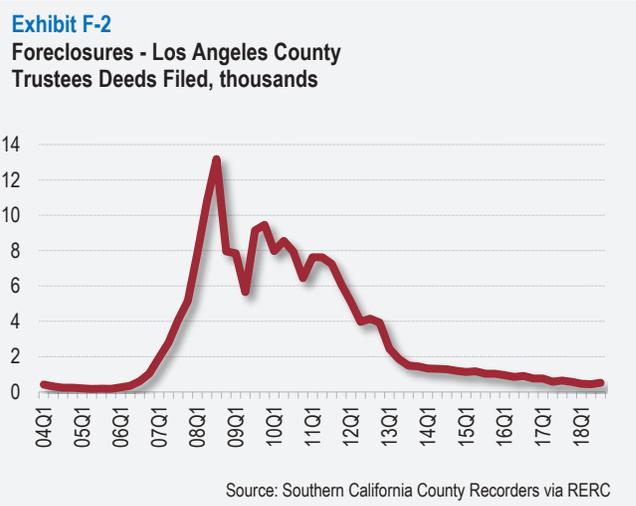
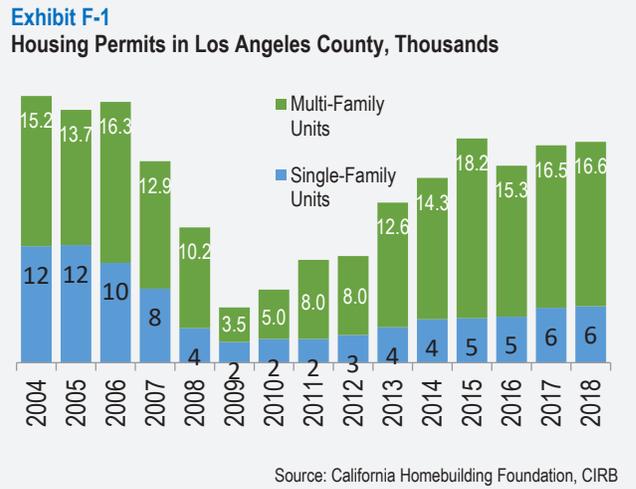
Building permit data is one of the leading indicators of the housing market. All new construction is required to file and obtain permits, making them a good way to predict changes in the market.

Exhibit F-1 displays the total number of all new housing (residential) permits issued in Los Angeles County from 2004 through 2018.

Despite the economic recovery and broad-based economic growth in recent years, the region is still vastly underproducing housing. Permits for the past several years have averaged around 22,000 per year, which is significantly below their prerecession numbers. In contrast, the county has added roughly 3 times as many jobs per year in that period. Unfortunately, there is little evidence that these trends will change soon. If the housing shortage is to be addressed there will need to be either major zoning reforms, to allow more infill housing, or vast development at the periphery, which would pose major risks to the region’s climate change goals and substantial threats from wildfires.

Fortunately, the recently completed Regional Housing Needs Assessment for the region has elected to attempt to push more of the region’s future housing development towards coastal regions that are home to many more jobs than people. But the government mandating changes and those changes actually taking place are very different things. So, it remains to be seen whether the desired result of more dense infill housing near job centers and transit options actually occurs.

One positive trend that might signal there is hope for that outcome is the shift from single-family to multi-family units in the permitting data. If this trend continues, we should see an impact on affordability, as it is vastly easier to produce affordable housing in a dense multi-unit context than in freestanding single-family homes.



### Housing Sales Prices

Pricing of homes is a major determinant in the demand for housing. The foreclosure crisis put downward pressure on prices as the market was flooded with distressed properties, as shown in Exhibit F-2.

Foreclosures have been dramatically reduced as the economy has improved, although they are still above their pre-recession low. It is likely that positive economic growth has reduced them, however the absurd level of housing prices means that many mortgages are at the very limits of what buyers can pay, making foreclosures more likely.

Exhibit F-3 shows changes in the median price of new and existing homes in Los Angeles County from 2007 through the end of 2018.

The peak median sales price for existing homes reached \$537,000 in 2007 before falling to a post-peak trough of \$312,000 in 2011, a decline of 41.8%. By 2018 it had passed its previous peak to reach a median price of \$595,000.

The pre-recession peak median price for new homes was \$504,000 in 2007 and the post-peak trough was \$377,000 in 2012, a decline of 25.2%. However, it reached a new peak median price of \$653,000 for new home sales in 2018, far beyond its earlier peak and substantially out of reach for the vast majority of the county’s residents.

One noteworthy aspect is the dynamics between new and existing home sales. While prices for new homes have begun to level off, prices of existing homes continue to rise. This is because there is still incredible demand at the low end of the market, so cheaper and existing housing stock is being bought up at rapid rates while newer more expensive homes have difficulty selling.

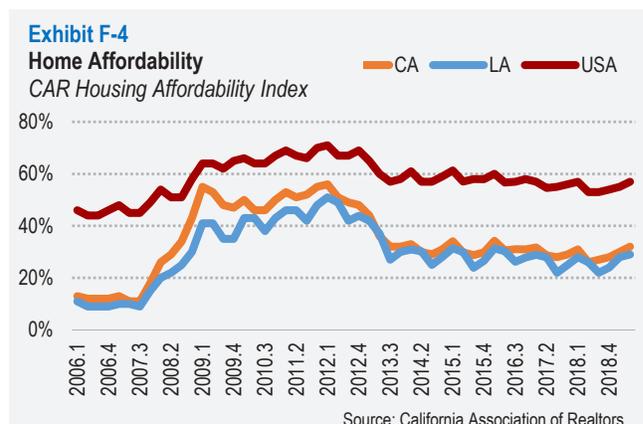
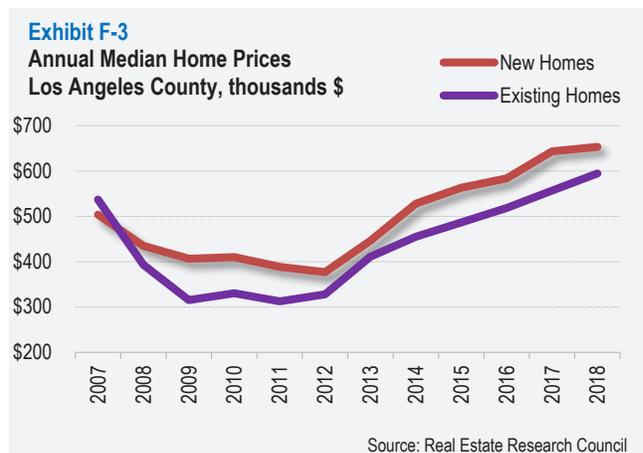
## Housing Affordability

Affordability indices measure how well a family can meet the expense of purchasing a home in the area. As home prices continue to spiral well beyond the incomes of local households, there is an increasing focus on affordability in a region gripped by housing shortages.

Exhibit F-4 displays the California Association of Realtors Home Affordability Index for the U.S., California, and Los Angeles County from 2006 through the second quarter of 2019.

The HAI in Los Angeles County averaged 11 in 2006 and 2007, meaning only 11% of households in the county could afford to buy a median priced home. As the housing crisis intensified and home prices plunged, the HAI peaked at 46 in 2012.

Since 2013, the HAI has leveled off at roughly 30% for both the county and the state. Although there has been slight improvement in recent months, most of the population in the region still cannot reasonably afford a home.





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