2018-2019

ECONOMIC FORECAST & INDUSTRY OUTLOOK

LAEDC

INSTITUTE FOR APPLIED ECONOMICS
Los Angeles County Economic Development Corporation

ECONOMIC FORECAST & INDUSTRY OUTLOOK

CALIFORNIA AND LOS ANGELES COUNTY 2018-2019

Somjita Mitra Ph.D.
Shannon M Sedgwick
Tyler Laferriere
Eric Hayes

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Institute for Applied Economics
Los Angeles County Economic Development Corporation
444 S. Flower Street, 37th Floor • Los Angeles, CA 90071
(888) 4-LAEDC-1 • www.LAEDC.org

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2018-2019

Forecast At-A-Glance

ECONOMIC FORECAST & INDUSTRY OUTLOOK

EXHIBIT ES-1

United States Indicators

	HISTORICAL		FORECAST	
	2016	2017	2018f	2019f
Real GDP (annual percent change)	1.9	2.4	2.3	2.1
CPI (annual percent change)	1.3	2.1	2.4	2.2
Unemployment rate (percent)	4.9	4.4	4.0	3.9
Annual percent change in employment	1.8	1.6	1.6	1.5
Change in total nonfarm jobs	2,509,000	2,275,000	2,370,000	2,280,000

- The U.S. economy will remain on a fairly steady, though undistinguished, growth path over the next few years
- With growing confidence in their financial situation and continued job growth, consumer spending will stay on an upward trajectory
- Projected to increase, government spending will be a positive contributor to GDP growth in the U.S.

EXHIBIT ES-2

California Indicators

	HISTORICAL		FORECAST	
	2016	2017	2018f	2019f
Real GDP (annual percent change)	3.3	2.5	2.7	2.6
Population growth rate	0.6	0.8	0.9	0.9
Unemployment rate (percent)	5.4	4.8	4.4	4.2
Annual percent change in employment	2.6	1.8	1.9	1.8
Change in total nonfarm jobs	421,500	295,500	324,700	311,800

- California has and will continue to outpace the nation in economic growth, now accounting for 14.1 percent of U.S. GDP
- Already at full employment, unemployment will continue to decline, which should trigger upward wage pressure
- Job growth continues across most industry sectors, but is now likely to slow as the labor market tightens

EXHIBIT ES-3

Los Angeles County Indicators

	HISTORICAL		FORECAST	
GDP	2016	2017	2018f	2019f
Annual percent change in real GDP	2.1	3.2	2.4	2.2
Population (thousands)	10,215	10,278	10,328	10,382
Population growth rate	0.3	0.6	0.5	0.5
Unemployment rate (percent)	5.2	4.6	4.3	4.1
Annual percent change in employment	2.5	1.3	1.1	0.8
Change in total nonfarm jobs	108,900	56,900	47,800	34,300
Residential permits	20,213	22,010	23,061	23,143
Median home price	519,300	560,858	592,094	624,901

- Los Angeles County's economic performance will continue to outpace the nation
- The unemployment rate across Los Angeles County has fallen and will moderate over the next few years as job growth absorbs new labor market entrants
- Personal income has grown, and inflation-adjusted per capita incomes will continue to rise slightly as well

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1 U.S. Economy

Augmented by bullish financial markets, the United States economy performed almost 0.8 percent better in 2017 than in 2016, adding roughly 2.4 percent to the national Gross Domestic Product (GDP). In real terms, this translates to $376.5 billion added to the national economy. This can be largely attributed to improved investor and consumer confidence and a two-year trend of increased net exports. This compares favorably to the anemic 1.8 percent growth of 2016, and should economic headwinds remain favorable, suggests a stable – if modest – trajectory of growth.

On December 22nd, 2017, the President of the United States signed into law the Tax Cuts and Jobs Act of 2017, substantially altering the federal corporate and income tax structure. Particularly, the corporate tax rate will be permanently (though politically provisional) changed from 35 to 21 percent. Most households will witness a marginal effective tax rate decrease, but the elimination of state and local income and sales tax deductions potentially portends the loss of some high-income earners from high-tax localities and states, such as New York, New Jersey, Illinois and California, putting their tax bases and economic activity at some risk. Moreover, the reduction of the mortgage deduction will impact the ability of households with less liquidity to afford new homes.

As of this forecast, the euphoria in the financial markets has been tempered by volatility and stock value losses. After reaching an all-time high of over 26,600 points, the Dow Jones Industrial Average lost almost 1,200 points in a single day of trading. This was followed the next week by another loss of 1,000 points. Suffice to say, the "bull" pulling the market through 2017 has come somewhat untethered. Together with stock buybacks in the wake of a slashed corporate tax rate, more investors trading in exchange traded products that use volatility-index futures as a "hedge" – such as the CBOE Volatility Index (the "VIX"), and rising interest rates, the stock market could see further volatility as investors and companies search for yield and peace of mind in other financial markets and products.

With a new chair at the helm of the U.S. Federal Reserve System (the Fed), the central bank is liable to continue the recent "tightening" cycle, which began in December 2016, of increasing interest rates as consumer spending and inflation continue to rise. The era of basement-level interest rates and cheap credit appear to be over, and monetary policy will be tempered to reflect an economic recovery that has aged to maturity. Higher interest rates will mean increased returns on saving and, if the economic orthodoxy is to be believed, an increase in investment. Despite the tax overhaul triumph, the current Congress has yet to pass a comprehensive budget agreement. Hitherto, legislators on Capitol Hill have only managed a continuing resolution to keep the federal government funded until March.

The President's recently released budget request (with budget priorities) is already controversial, as it suggests deep cuts to federal agencies and departments, such as the Environmental Protection Agency, the State Department and the Department of Agriculture, while adding significantly to the coffers of the Defense Department, Homeland Security and Veterans Affairs. Health and Human Services would also benefit from this budget proposal, should it pass Congress, due largely to spending increases on Medicare as America continues to age.

The President's $4 trillion proposal would leave the federal government with a $1 trillion budget deficit. Augmented with the projected $1 trillion 10-year budget deficit due to the new tax regime, the national debt will grow well past its current $20.6 trillion mark, causing what the Congressional Budget Office forecasts will be a structural long-term imbalance between spending and revenues, and stymying the potential for the federal government to use spending policies or other emergency government actions to respond to any unexpected economic challenges.

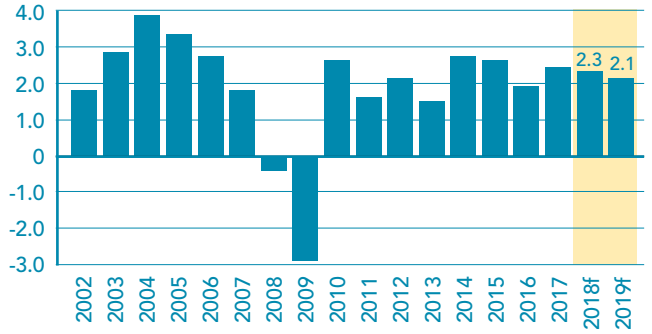
Over one year into a new administration, much about the intermediate-term direction of the U.S. economy remains open for debate. Upcoming midterm elections for many of the country's local, state and federal offices may present fresh economic and fiscal policy opportunities in 2019, but the full effect of the Tax Cuts and Jobs Act will not be felt for a few years, even though many of the economic decisions are being made in the present.

As unemployment continues to decline at the aggregate level, real wages – wage increases beyond inflation – should continue to increase, buoying household spending and investment. In the short-term, conventional economic forces will likely outpace automation and the disruptive forces of technology on the labor market. If anything, technology will augment human productivity by eliminating some of the more routine job tasks or activities before replacing it altogether. However, the specter of robot workers, artificial intelligence and automated processes should be taken seriously by policymakers and educators.

The name of the game, then, is cautious optimism; the national economy continues to show unsung health and modest annual growth. Even in the face of regulatory and political uncertainty, economic fundamentals continue to remain strong. Though not likely to get to the bullish 3.0 percent real GDP growth threshold some policymakers predict, the U.S. economy is predicted to grow steadily over the next two years. Combined with the concerns and assumptions presented here, the prediction is that the economy will growth 2.3 percent in 2018 and 2.1 percent in 2019.

EXHIBIT 1-1

Growth in Real GDP
(Annual % Change)



Source: BEA; forecast by LAEDC

LAEDC forecasts 2018 and 2019 growth conservatively. Political gridlock even after the midterm election will increasingly unnerve investors, both foreign and domestic. Infrastructure investment, if implemented in accordance with the current $200 billion White House proposal, would largely be used on incentive programs to spur increased state, local and private contributions for infrastructure. This limits the capacity of federal infrastructure spending to stimulate growth.

The first effects of the new corporate tax rates, especially for American workers, are still underdetermined as of this early date. Some companies have offered one-time bonuses and promised to increase investment in the U.S., while other companies have initiated stock buybacks and one-off shareholder distributions. Over the longer-term, it has yet to be determined whether companies will raise wages and hire more workers, as opposed to investing in automation.

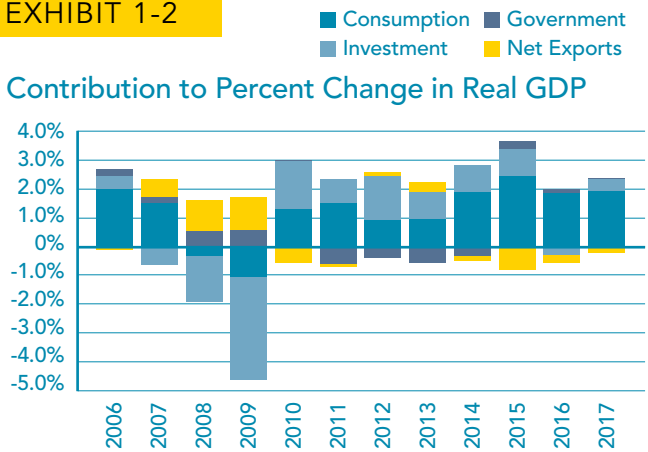
Finally, extreme weather events appear to be on the rise, costing billions in damages annually and costing jobs. As natural disasters of various forms presumably increase, the economic impact of the environment will likely proportionately increase.

Contributions to GDP Growth

Since 2014, domestic consumption has contributed roughly 2 percent to annual GPD growth. Suffice to say, consumption of domestic goods and services is the driver of current growth. Investment at its peak drove above 1.5 percent of GDP growth. However, this has diminished recently, adding just 0.5 percent to the 2.4 percent growth in 2017. As a proportion of the GDP, investment has consistently grown since the depths of the recession. Conversely, government spending has decreased, as might be expected given the economic recovery and diminished need for fiscal stimulus. Attention should be paid to this dichotomy, that is, the growth of national investment but its seeming inability to drive economic growth. Government policy and concerns over the national debt might see this trend continue and deepen in the future. ♦

EXHIBIT 1-2

Contribution to Percent Change in Real GDP



Source: BEA

Consumer Sector

Domestic consumption naturally bottomed out at the peak of the Great Recession in 2009, but since then domestic consumption has grown, albeit inconsistently. In 2017, consumption increased by 2.7 percent, compensating not only for the low contribution of investment and government expenditure to growth, but also the continued trade deficit. Providing that consumers respond to the tax overhaul with confidence and indeed see increased annual after-tax earnings, domestic consumption should be expected to increase in the near-term. However, concerns over political gridlock and policy uncertainty might temper this growth.

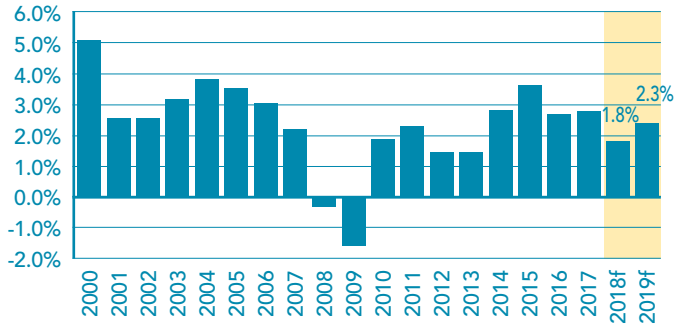
Labor Markets

U.S. unemployment continues to dive lower than the "golden" 5.0 percent level, which conventional economic wisdom touts as so-called "full employment" (essentially an economy in which all eligible people who want work can find employment at current wage rates). Indeed, current unemployment sits at 4.4, and the LAEDC predicts it to fall to 3.9 percent by 2019. Moreover, the U.S. economy will likely add roughly 2.37 million jobs in 2018 and 2.28 million jobs in 2019, indicating residual labor market flexibility beyond the traditional benchmarks. The last time unemployment was this low was in 2000, just before the "Dot-com bubble" burst and the economy went into the first recession of the 21st century. Thus, like recent record stock market gains followed by intense losses, this low unemployment projection and continued expansion of the labor market should be viewed with some caution.

In addition, the diminution of unemployment indicates a continued contraction of the U.S. labor supply, meaning real wages should continue to increase and drive up inflation through consumer spending. For this reason, change in employment might fall in the medium-term given a likely contraction of credit with higher interest rates. The threat of automation and higher labor costs driving capital-labor substitution in many service industry jobs is also likely to erode the continued addition of new jobs. ♦

EXHIBIT 1-3

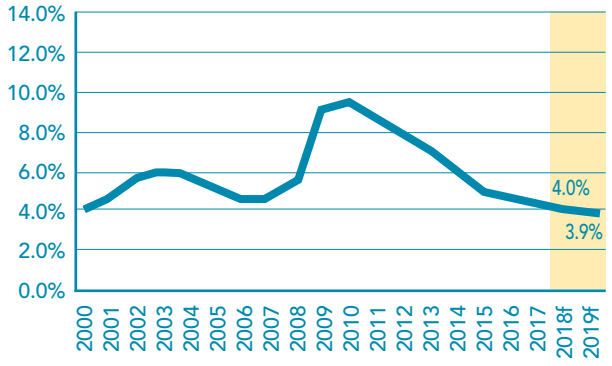
Growth in Real Consumer Spending
(Annual % Change)



Source: BEA; forecast by LAEDC

EXHIBIT 1-4

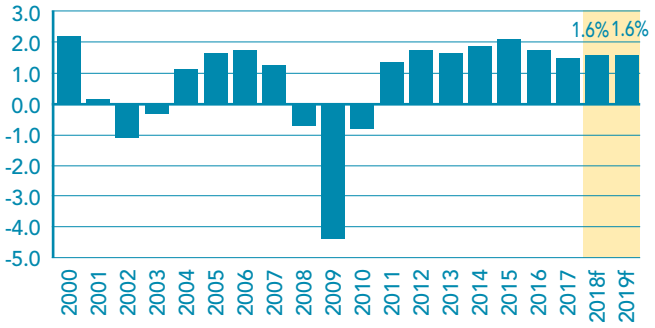
Unemployment Rate



Source: CA EDD; forecast by LAEDC

EXHIBIT 1-5

Change in Employment
(Annual % Change)



Source: CA EDD; forecast by LAEDC

Business Investment

Having shrunk by 0.6 percent in 2016, non-residential business investment rebounded by 4.7 percent in 2017, due, in large part, to increased business and investor confidence in the economy and financial markets after the 2016 election, along with the improved health of the American and global economies, especially across Europe and in key emerging markets. Moreover, the price of crude oil and interest rates on 3-month Treasuries rose over the course of 2017, further strengthening the case for investor confidence.

Non-residential investment is predicted to grow again in 2018 and 2019, though at the more modest rates of 3.3 percent and 2.3 percent, respectively. By 2019, investment growth will mirror GDP growth more closely. Given the recent downward volatility in the capital markets followed by a steadier recovery, reasons abound for which to be cautiously optimistic. Foreign economies, especially across Europe, appear strong despite the looming specter of Brexit. Companies in the U.S. have taken the slashed corporate income tax rate to heart, engaging in stock buybacks and rewarding stockholders and, in many cases, employees with bonuses. Finally, many companies, such as Apple, which committed to invest $350 billion in the U.S. over five years, have promised increased domestic investment as a result of the Tax Cuts and Jobs Act's lowered corporate tax rate and one-time discounted repatriation tax.

On the other hand, credit will likely become more expensive in the near-term due to rising interest rates, tempering the amount of new investment by companies as they grapple with having more cash-in-hand from tax cuts but higher borrowing costs.

Investment in Residential Housing

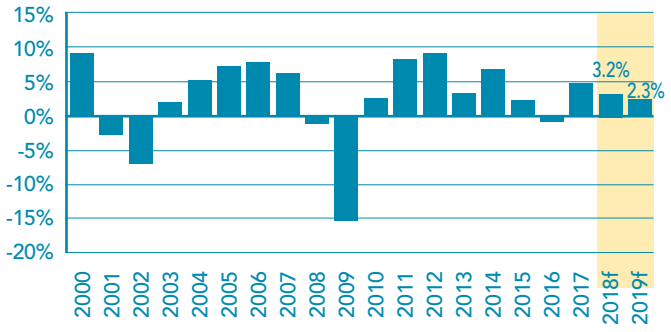
The boom in housing construction between 2012 and 2016 appears to have ended in 2017 with a mere 0.017 percent growth in housing construction. As the long-term employment effects of the Great Recession, especially as Millennials (those born after 1980 and coming of age in the new millennium) struggle with mounting debt burdens and, depending on education, lack of employment opportunities, the supply of new homes has clearly followed the lack of demand. As the urbanization trend, with more Americans moving to dense urban areas, continues to grow, the number of new residential developments will also likely fall as apartment complexes and condominiums replace suburban single-family homes as the dominant form of domicile.

The anemic growth in new housing is predicted to continue in 2018 and 2019, each year seeing only about 0.02 growth in residential housing construction. The housing market will also likely to suffer from a real estate investment market that is still leery of housing as an investment vehicle. Moreover, broader employment trends, especially the hollowing out of historical middle class employment niches in many sectors, such as in manufacturing, mean fewer people with the financial means to take out a home loan. Should interest rates rise in the near-term as expected, this problem will only be exacerbated.

Finally, environmental and extreme weather concerns, especially in the once booming Sun Belt, will likely cause developers to think twice about the long-term viability of new housing in areas prone to drought, storms, floods, fires or other disasters. ♦

EXHIBIT 1-6

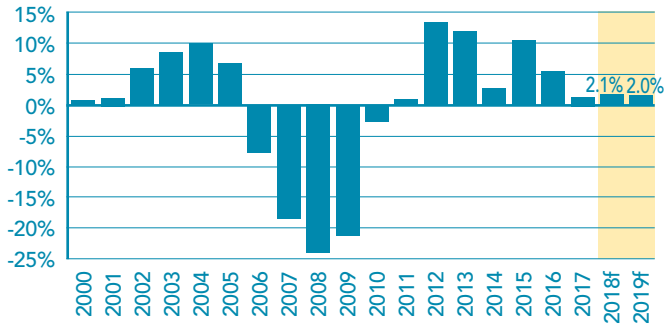
Growth in Real Non-Residential Investment
(Annual % Change)



Source: BEA; forecast by LAEDC

EXHIBIT 1-7

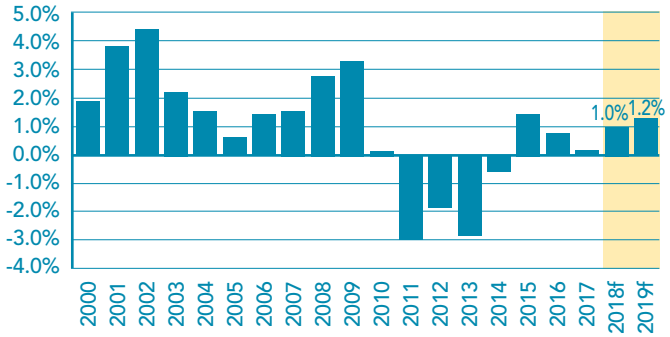
Growth in Real Residential Construction
(Annual % Change)



Source: BEA; forecast by LAEDC

EXHIBIT 1-8

Growth in Real Government Spending / Investment
(Annual % Change)



Source: BEA; forecast by LAEDC

Government

Due to the inability to pass a comprehensive budget in 2017, government expenditures increased by only 0.001 percent last year. However, government spending at the federal level is predicted to increase modestly in the near-term, due in part to nondiscretionary spending increases in many federal entitlements, such as Medicare and Social Security, as a proportion of federal outlays to meet the challenges of an aging population. The new administration also appears poised to increase spending in the areas of defense, infrastructure, homeland security and veterans' affairs.

Infrastructure continues to be a policy topic in Washington, though there are disagreements on the extent of federal outlays vis-à-vis local and state-level matching. In either case, government spending will likely expand to help capitalize new infrastructure projects across the country.

In the wake of the passage of the Tax Cuts and Jobs Act, most third-party estimates predict larger budget deficits to cover the shortfall of revenue, even when scoring dynamically for economic growth. Government spending, and hence borrowing, will likely increase to cover this shortfall. This will be augmented by a lack of policy focus on the national debt and government expenditure, at least in the short-term. ♦

Foreign Trade

While international trade has an important function to play in the overall economy through reduction of prices of consumer goods, increased revenues and a reduction of supply chain costs for domestic manufacturing firms, and encouraging innovation through comparative advantage, it plays only a small part in overall economic growth in the U.S. This does not, however, diminish the importance of trade to the economy; most of the growth effects induced by trade are captured in domestic consumption, and corporate saving and investment. Indeed, as the value of imports generally outweighs the value of exports, the contribution of net foreign trade to economic growth is generally negative.

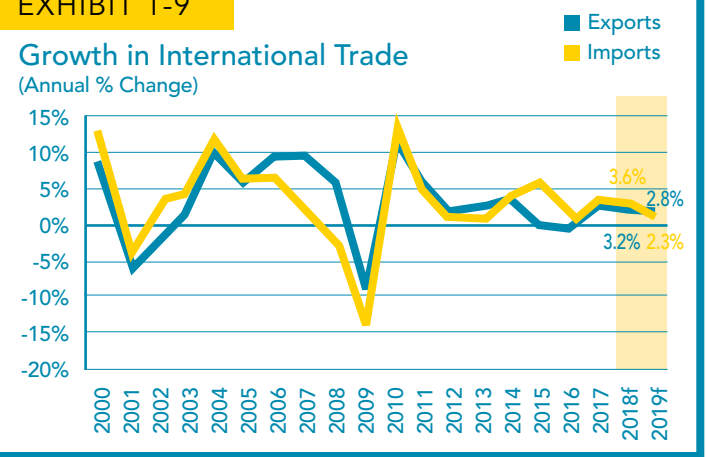
Annual percent changes in the value of imports and exports are rather volatile and highly dependent on relative currency valuations and economic conditions of our trading partners.

Though peaking (relative to previous years) in late-2016, the U.S. dollar remains strong vis-à-vis other world currencies. This makes goods, especially in developing economies, cheaper to purchase, which means U.S. firms will continue to reduce supply chain costs by purchasing materials, labor and finished goods from abroad.

Owing to the dollar's relative strength, imports grew by 4 percent in 2017. However, exports grew by 3.3 percent, indicating that despite the purchasing strength of dollar relative to, for example, 2008 and 2011, foreign consumers are demanding U.S. goods in sufficient quantity to close the gap between import and export growth. This trend is predicted to continue.

Both exports and imports are expected to grow again in 2018 and 2019, by 3.2 percent and 3.6 percent, respectively. For the first time since 2013, exports are expected to exceed imports in growth by 2.8 to 2.2 percent, respectively. Given the withdrawal of the U.S. from the Trans Pacific Partnership (TPP) and the renegotiation of the North American Free Trade Agreement (NAFTA), due to end in 2019, the contraction in imports might be as much about trade policy as it is about economic forces. ♦

EXHIBIT 1-9



Source: BEA; forecast by LAEDC

Prices

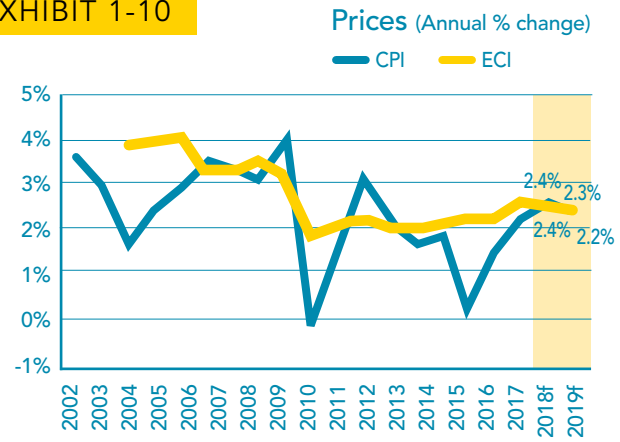
Prices, interest rates and financial returns can be among the most difficult indicators to predict, resting as they do on varying levels of investor psychology and consumer confidence, as much as market fundamentals. Despite the volatility of the equity markets in early February 2018, the stock and bond markets (though both under pressure due to rising interest rates) remain strong and consumer confidence, at least as measured by consumer spending, appears on the upswing as well.

The annual percent change in the consumer price index (CPI), the most widely used measure of inflation, finally exceeded the benchmark 2.0 percent in 2017. As such, the continued trend of Fed interest rate hikes is predicted to continue into 2018 and 2019, with three hikes widely expected in 2018.

While wages have not performed as expected since the recovery, the overall employment cost index (ECI), which measures all employment costs, including wages and benefits, across all workers, has been on an upward trajectory, increasing by 2.2 percent in 2016 and 2.5 percent in 2017. The ECI, which is a better measure of employee compensation than just wages (as employers attempt to reallocate compensation from wages to increasingly costly benefits), is expected to continue to grow by 2.4 and 2.3 percent in 2018 and 2019, respectively.

Similarly, inflation is expected to continue to increase at 2.4 and 2.2 percent in 2018 and 2019, respectively, finally showing wage increases that reflect a still tightening "full employment" labor market. ♦

EXHIBIT 1-10



Source: BLS; forecast by LAEDC

EXHIBIT 1-11

United States Indicators

	HISTORICAL						FORECAST	
GDP (annual percent change)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018f**	**2019f**
Real GDP	2.1	1.5	2.7	2.6	1.9	2.4	2.3	2.1
Real personal consumption expenditures	1.5	1.5	2.9	3.6	2.7	2.7	2.6	2.2
Real business investment (nonresidential)	9.0	3.5	6.9	2.3	-0.6	4.7	3.3	2.3
Real residential investment	13.5	11.9	3.5	10.2	5.5	1.7	2.1	2.0
Real government expenditures	-1.9	-2.9	-0.6	1.4	0.8	0.1	1.0	1.2
Real imports	2.2	1.1	4.5	5.0	1.3	3.9	3.6	2.3
Real exports	3.4	3.5	4.3	0.4	-0.3	3.4	3.2	2.8
Prices								
Consumer price index	2.1	1.5	1.6	0.1	1.3	2.1	2.4	2.2
Employment cost index	1.9	1.9	2.1	2.1	2.2	2.5	2.4	2.3
Labor market								
Unemployment rate (percent)	8.1	7.4	6.2	5.3	4.9	4.4	4.0	3.9
Average annual nonfarm employment (thousands)	134,180	136,380	138,960	141,840	144,350	146,630	149,003	151,282
Annual percent change in employment	1.7	1.6	1.9	2.1	1.8	1.6	1.6	1.5
Jobs (change over previous year)								
Total Nonfarm	2,250,000	2,200,000	2,580,000	2,880,000	2,510,000	2,280,000	2,370,000	2,280,000
Natural Resources	60,000	10,000	30,000	-80,000	-140,000	10,000	-20,000	-10,000
Construction	120,000	210,000	290,000	310,000	270,000	230,000	220,000	210,000
Manufacturing	200,000	90,000	170,000	150,000	10,000	90,000	120,000	100,000
Wholesale Trade	130,000	60,000	80,000	40,000	10,000	40,000	60,000	50,000
Retail Trade	170,000	240,000	280,000	240,000	230,000	40,000	210,000	170,000
Transport / Warehousing / Utils	120,000	80,000	160,000	220,000	140,000	150,000	130,000	140,000
Information	10,000	30,000	20,000	20,000	40,000	10,000	30,000	20,000
Finance & Insurance	60,000	60,000	40,000	100,000	120,000	120,000	80,000	90,000
Real Estate / Rental & Leasing	30,000	40,000	50,000	40,000	50,000	50,000	40,000	4,000
Prof / Scientific / Tech Services	220,000	230,000	220,000	270,000	220,000	170,000	230,000	210,000
Management of Companies	90,000	80,000	70,000	40,000	40,000	40,000	60,000	50,000
Administrative & Support	290,000	270,000	270,000	260,000	160,000	190,000	250,000	230,000
Educational Services	90,000	10,000	70,000	50,000	100,000	100,000	60,000	70,000
Health Care / Social Assistance	360,000	300,000	290,000	540,000	510,000	450,000	370,000	400,000
Leisure & Hospitality	420,000	480,000	450,000	460,000	500,000	390,000	440,000	440,000
Other Services	70,000	50,000	90,000	50,000	70,000	90,000	60,000	70,000
Government	-170,00	-70,000	30,000	150,000	190,000	100,000	40,000	40,000

2 California Economy

California enjoys a remarkably diverse economy and is a global leader in a number of innovative industries, including information technology, aerospace, entertainment and the biosciences. California hosts millions of visitors each year who support the state's tourism industry, while farmers and ranchers across the state provide food for nations around the world.

In 2017, California's economy grew at an estimated rate of 2.5 percent, faster than the nation as a whole, which grew at 2.4 percent. While impressive, California's economy continued to slowdown from the 3.3 percent year-over-year growth achieved in 2016, and from the over 4 percent year-over-year percentage growth seen in 2014 and 2015. California currently accounts for 14.1 percent of the nation's GDP, far more than any other state, and its GDP is expected to expand by 2.7 percent in 2018 and 2.6 percent in 2019, again outpacing the nation.

Employment

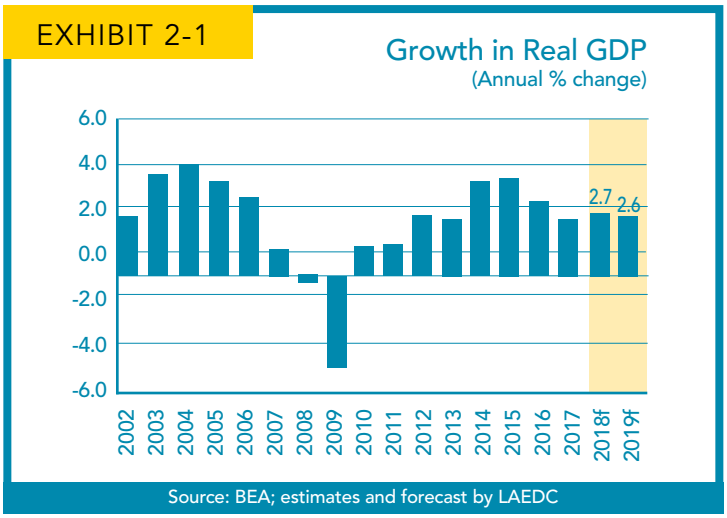
In 2017, California's unemployment rate averaged 4.8 percent, the lowest since 2000. Unemployment is expected to decline further, though slowly over the next two years, reaching 4.2 percent in 2019, as the state perhaps reaches above full employment[1], where the economy is producing goods and services at a higher level than normally expected.

Nonfarm employment was up in 2017 by 295,500 wage and salary jobs, reaching a total of 16.8 million jobs, an increase of 1.8 percent over 2016.

Over the course of 2017, nearly all major industry sectors in California added jobs. The largest private sector gains occurred in: health care and social assistance (62,300 jobs added); leisure and hospitality (47,100 jobs added); and construction (41,100 jobs added). The public sector added 46,400 new jobs last year.

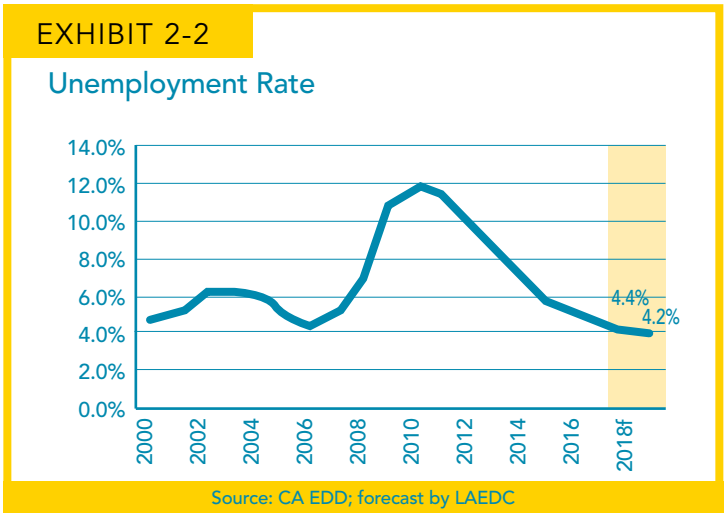
While most sectors added jobs, two sectors continued shedding jobs. Manufacturing continued its long-term sectoral decline in jobs by shedding 6,900 jobs last year, and natural resources lost 1,600 jobs.

EXHIBIT 2-1



Source: BEA; estimates and forecast by LAEDC

EXHIBIT 2-2

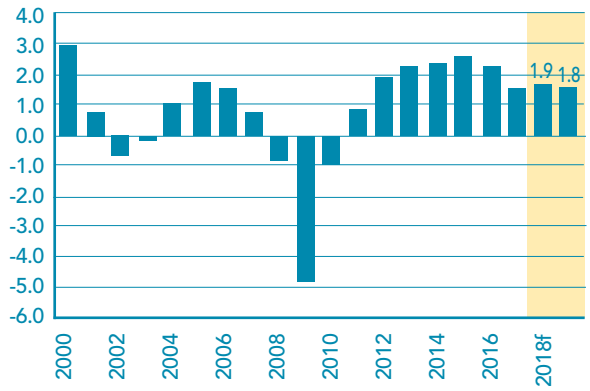


Source: CA EDD; forecast by LAEDC

[1] *Strictly speaking, the economic orthodoxy says full employment is at or around 5.0 percent unemployment. The remainder is frictional unemployment, i.e., a natural residual labor pool that exists as the result of firms hiring and firing and laborers looking for new/better/alternate work opportunities. The important lesson from anything less than 5.0 percent unemployment is that the scarcity of labor should drive up real wages, inducing price inflation and a more contracted credit market through higher interest rates.*

EXHIBIT 2-3

Change in Employment
(Annual % change)



Source: BEA; forecast by LAEDC

Looking ahead, the rate of job creation will rise slightly to 1.8 percent annually in 2018 and fall back to 1.7 percent in 2019. This equates to 324,700 new jobs this year and 311,800 jobs in 2019.

The sectors expected to add the largest number of jobs over the two years are administrative and support services (137,400 new jobs), and health care and social assistance (100,300 new jobs). After three years of falling job numbers, natural resources will stabilize and add over 1,400 jobs.

Importantly, manufacturing employment is also expected to grow through 2019 after falling 0.5 percent in 2017, which was on the heels of a consecutive six-year increase. Going forward, the net employment gain over the next two years in manufacturing is an expected 30,040 jobs. It's worth noting that California's manufacturing sector shed 166,700 jobs in the period from 2007 through 2017, so while higher jobs counts over the next two years are welcome, it remains unlikely they foretell a return to pre-recession employment levels.

At 3.0 percent job growth in 2017, the Inland Empire generated jobs at the fastest pace among most metro regions in the state. This was followed by Ventura County (2.6 percent), San Francisco County (2.1 percent), Fresno County (2.0 percent); and Santa Clara County (1.7percent).

In Southern California, nonfarm employment in San Diego County grew by 1.6 percent in 2017, Los Angeles County employment increased by 1.2 percent, and Orange County employment grew by 0.7 percent. ♦

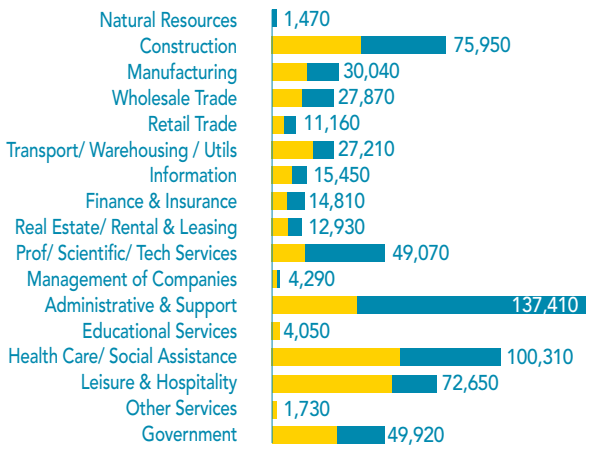
Personal Income

Along with employment growth, California's residents experienced modest gains in personal income. Total real personal income in the state increased by 3.9 percent in 2017 to almost $2.3 trillion, due to tight labor markets exerting upward pressure on wages. Per capita income in California was $58,063 in 2017. Over the next two years, additional wage gains of 2.9 percent in 2018 and 2.8 percent in 2019 are expected.

Still, it is a tale of two California's, as there are a number of regions within the state where the labor markets continue to struggle with high unemployment and low growth. As of December 2017, three of California's 58 counties still had unemployment rates of more than 10 percent, and nine more had rates higher than 8 percent. The highest recorded unemployment rates in California are in Imperial and Colusa counties with unemployment rates of 17.9 percent at 17.3 percent, respectively.

EXHIBIT 2-4

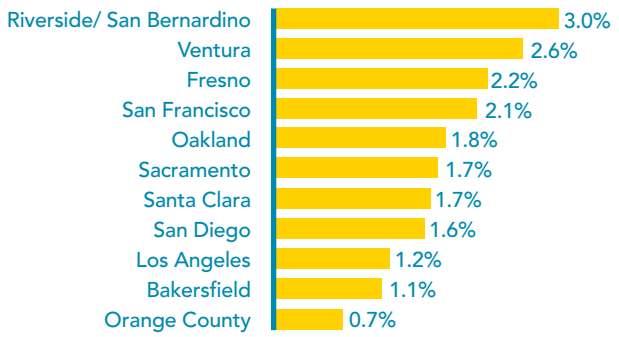
Job Forecast 2018 and 2019 by Industry Sector
(thousands of jobs)



Source: CA EDD; forecast by LAEDC

EXHIBIT 2-5

Job Growth by Metros
(% change over 2016)



Source: CA EDD

At the opposite end of the scale, the lowest unemployment rates are in San Mateo County (2.1 percent), followed by Marin County (2.3 percent) and San Francisco (2.4 percent). ♦

Major Industries

High Technology: California's high technology sector includes firms in the computer and electronic product, aerospace and pharmaceutical manufacturing industries, as well as those in: software publishing; data processing; computer systems design; management, scientific and technical consulting; and scientific research and development services. Approximately two-thirds of California's technology workers are employed by service-providing firms, as opposed to manufacturing firms.

Technology employment in California reached just over 1.15 million workers in 2017, growing 1.5 percent (or 17,300 jobs) over the previous peak of 1.14 million workers in 2016. While overall employment was up last year, job growth has been concentrated almost entirely in technology service-providing industries. Over one-third of the new technology jobs created in 2017 were in computer systems design (5,900 jobs). Employment also rose in management, scientific and technical consulting (700 jobs), and in scientific R&D services (1,000 jobs). Electronic product manufacturing employment grew by 700 jobs, while aerospace product and parts manufacturing jobs declined by 1,100 workers. Pharmaceutical and medicine manufacturing employment rose by 1,400 jobs.

Agriculture: California is the nation's leading producer of fruits, vegetables, nuts and dairy products, and a major exporter of agricultural products. The state's highest value commodities are milk, grapes, almonds and nursery plants. The value of agricultural real gross product in California accounted for about 1.2 percent of the state's $2.4 trillion gross product in 2017. The number of farm workers in California rose to 431,700 in 2017 (an increase of 1.2 percent compared with 2016) and accounted for 2.5 percent of civilian employment in the state.

In 2016, the latest year for which data is available, California's farms and ranches generated cash receipts of $45.3 billion (inflation-adjusted), more than any other state in the nation, accounting for 13 percent of the national total. Still, this was a decline of 4 percent compared with 2015. The dairy industry is the leading commodity in cash receipts, followed by almonds and grapes.

Health Care: The health care and social assistance industry is California's largest industry sector by employment and one of the state's fastest growing, providing jobs across a wide range of skill and income levels. Jobs in health care are found in doctors' and dentists' offices, hospitals, outpatient centers, laboratories, nursing facilities, and organizations that provide social services like child daycare, vocational rehabilitation and family services.

With over 2.2 million workers, health care accounts for slightly more than 13 percent of the state's 16.8 million nonfarm wage and salary jobs. In 2017, the health care sector added 62,300 jobs, which represents an annual growth rate of 2.9 percent. Over the next two years, health care employment will continue to increase, but the rate is expected to slow to 2.5 percent in 2018 and 1.9 percent in 2019.

Leisure and Hospitality: Total visitor counts in California were up by an estimated 2.1 percent on an annual basis in 2017, slowing from a slightly stronger growth rate of 2.2 percent in 2016. The industry projects an increase of 2.5 percent in total visits in 2018, with domestic travel projected to increase by 2.3 percent and international travel to decline by 0.9 percent. Expenditures by

business and leisure travelers to the state totaled $130.3 billion in 2017, an increase of 3.2 percent compared with 2016.

In 2017, leisure and hospitality jobs accounted for about 11.6 percent of nonfarm wage and salary jobs in California. While some leisure and hospitality activity is associated with tourism, many of these jobs serve the state's local populations more so than tourists and business travelers. Jobs in this industry include lodging, food services, the performing arts, museums, amusement parks and gambling establishments. Leisure and hospitality employment grew by 2.5 percent in 2017 to 1.9 million jobs, with an additional expected gain of 2.7 percent in 2018 and 1.0 percent in 2019.

Construction: Construction activity and employment in 2017 posted another increase after struggling in the years during and immediately following the recession. The value of nonresidential construction permits in 2017 rose by 8.5 percent to $29.9 billion. The strongest gains by sector were retail and new industrial buildings, while office and hotels and motels declined over the year. New residential construction also showed a moderate gain in 2017 but, for a variety of reasons, remains at historically low levels, significantly outpaced by population growth, which has become a major economic development and social issue.

Construction employment saw substantial growth in 2017, rising by 5.3 percent to 815,200 jobs. Employment gains in recent years have partially offset the jobs lost during the recession, but construction job counts were still down by almost 119,000 since 2007. Construction employment is expected to grow by an additional 4.8 percent in 2018 with an additional 4.4 percent gain projected for 2019, bringing California construction employment to within almost 5.0 percent of its pre-recession peak. ♦

EXHIBIT 2-6

California Indicators

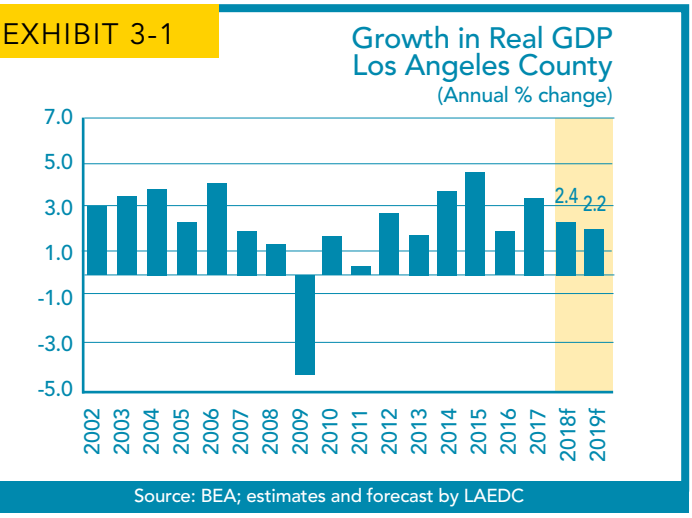
	HISTORICAL						FORECAST	
GDP	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018f**	**2019f**
Real GDP (millions $2009 chained)	2,013,611	2,064,534	2,150,580	2,245,876	2,320,345	2,379,111	2,444,180	2,508,779
Annual percent change in real GDP	2.6	2.5	4.2	4.4	3.3	2.5	2.7	2.6
Per capita real GDP ($2009 chained)	52,931	53,802	55,515	57,500	59,024	60,059	61,178	62,260
Annual percent change in p.c. real GDP	1.6	1.6	3.2	3.6	2.7	1.8	1.9	1.8
Total personal income (millions)	1,838,567	1,861,956	1,986,025	2,133,664	2,212,691	2,300,034	2,387,377	2,474,720
Per capita personal income (nominal)	48,330	48,523	51,267	54,627	56,285	58,063	59,756	61,415
Population								
Population (thousands)	38,042	38,373	38,739	39,059	39,312	39,613	39,952	40,295
Population growth rate	1.0	0.9	1.0	0.8	0.6	0.8	0.9	0.9
Labor market								
Unemployment rate (percent)	10.4	8.9	7.5	6.2	5.4	4.8	4.4	4.2
Average annual nonfarm employment	14,763,800	15,153,700	15,578,000	16,055,900	16,477,400	16,772,900	17,097,633	17,409,444
Annual percent change in employment	2.3	2.6	2.8	3.1	2.6	1.8	1.9	1.8
Jobs (change over previous year)								
Total Nonfarm	326,100	389,900	424,300	477,900	421,500	295,500	324,700	311,800
Natural Resources	1,700	100	900	-2,800	-4,200	-1,600	600	800
Construction	28,600	47,500	36,800	57,600	42,300	41,100	38,800	37,100
Manufacturing	5,100	1,800	17,500	21,500	4,100	-6,900	15,500	14,600
Wholesale Trade	16,200	17,000	14,700	8,300	7,400	13,900	13,700	14,200
Retail Trade	24,200	25,200	33,200	32,900	21,200	5,800	5,200	5,900
Transport / Warehousing / Utils	13,100	15,500	20,700	32,500	29,800	12,200	18,200	9,000
Information	4,300	13,300	13,300	24,300	36,800	7,700	8,700	6,700
Finance & Insurance	7,700	1,400	-7,000	13,300	14,900	4,600	6,000	8800
Real Estate / Rental & Leasing	3,700	7,900	6,500	6,400	6,800	4,700	8,100	4,800
Prof / Scientific / Tech Services	50,900	36,600	29,400	27,700	31,200	12,800	14,500	34,500
Management of Companies	6,300	11,900	4,400	2,500	-2,200	3,600	3000	1300
Administrative & Support	50,200	49,000	44,600	37,900	20,400	7,900	38,500	98,900
Educational Services	9,500	10,200	11,800	7,600	9,200	15,400	8,300	-4,300
Health Care / Social Assistance	59,300	65,000	56,300	78,100	72,800	62,300	56,800	43,500
Leisure & Hospitality	62,800	77,700	82,000	71,700	67,800	47,100	53,300	19,400
Other Services	11,000	11,900	19,600	8,900	11,800	18,700	6,300	-4600
Government	-28,600	-2,000	39,700	49,000	51,600	46,400	28,900	21,000

3 Los Angeles County

A thriving and vibrant metropolis, Los Angeles County is home to more than 10 million residents and boasts a workforce of more than 5.1 million people. The county remains one of the largest manufacturing centers in the nation, is a global gateway for trade and tourism, serves as the world's entertainment hub, and draws entrepreneurs and risk-takers from around the world.

In 2017, real GDP in Los Angeles County grew at 3.2 percent, an uptick from the prior year when the economy grew by 2.1 percent. Still, this year's growth rate was below the national rate of growth (2.4 percent). Real GDP growth is expected to be 2.4 percent for 2018 and 2.2 for 2019, outpacing the nation in both years (2.3 percent and 2.1 percent, respectively).

EXHIBIT 3-1



Source: BEA; estimates and forecast by LAEDC

Employment

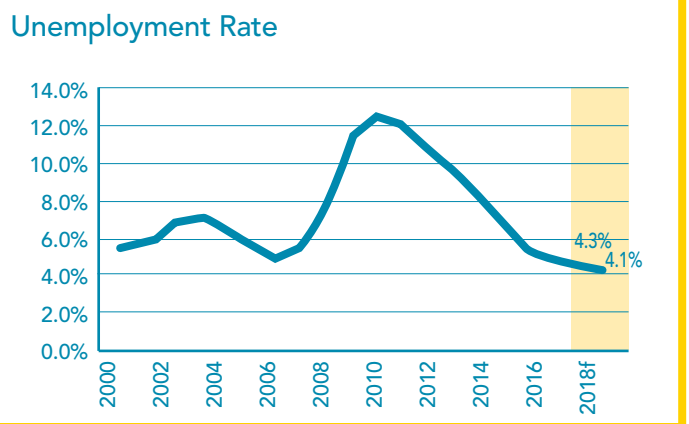
In 2017, the average unemployment rate in Los Angeles County reached 4.6 percent, the lowest unemployment rate since 2000 and more than 63 percent below the post-recession peak rate of 12.5 percent reached in 2010. It is expected to decline slowly over the next two years, falling to 4.3 percent in 2018 and reaching 4.1 percent in 2019 as the county, similar to the state, starts to tick above full employment[2].

Job growth has been positive since 2011, averaging 2.5 percent annually. This is expected to slow to 1.9 percent for the next two years as there are fewer jobs needed to be added and as the labor market tightens.

Nonfarm employment was up in 2017 by 56,900 wage and salary jobs, reaching just over 4.4 million jobs, an increase of 1.3 percent over 2016.

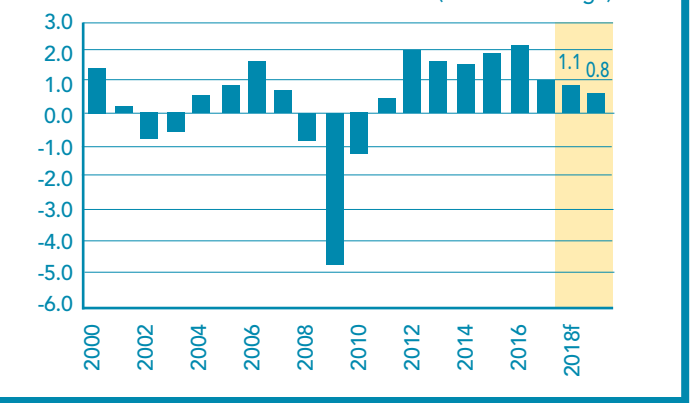
Almost all industry sectors added jobs in 2017. The largest private sector gains were in health care and social assistance (adding 21,800 jobs), leisure and hospitality (adding 7,900 jobs), and other services (6,700 jobs). Government payrolls grew by 1,200 jobs.

EXHIBIT 3-2



Source: CA EDD; forecast by LAEDC

EXHIBIT 3-3



Source: BEA; forecast by LAEDC

[2] *See footnote 1 herein.*

Four sectors shed jobs over the year. Manufacturing continued to shrink for the fourth consecutive year, losing 4,600 jobs in 2017. Retail trade contracted by 1,300 jobs. Finance and insurance shed 200 jobs, and the natural resources sector, which in Los Angeles County is confined to oil and gas field operations, declined by 100 jobs, the fourth consecutive yearly decline.

As the rate of job creation slows, the number of jobs added will also decline, with 47,800 jobs expected to be added in 2018 and 34,300 in 2019.

The sectors expected to add the largest number of jobs over the next two years are health care and social assistance (24,660 new jobs), and administrative and support services (16,320 jobs). Construction will add 14,610 over the next two years, and leisure and hospitality is expected to gain 12,120 jobs. After four consecutive years with an increase in job numbers, government employment will contract slightly by roughly 1,100 jobs. Manufacturing is expected to continue its decline in employment, losing 1,400 jobs through 2019. ♦

Personal Income

Personal income in Los Angeles County has been rising, posting consecutive year-over-year increases since 2013. In 2016, personal income totaled $563.9 billion and is predicted to reach $585.5 billion in 2017.[3] We forecast this personal income growth pattern to continue, reaching $619.7 billion in 2019.

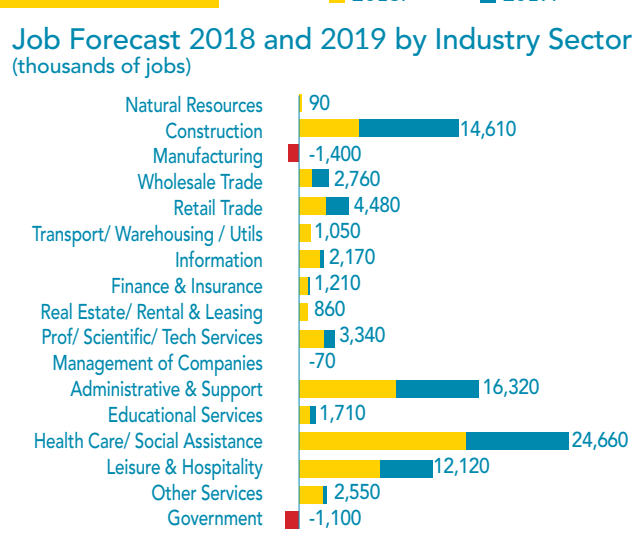
Similar to total personal income, real per capita income has also been rising, reaching $48,790 in 2016 and $50,650 predicted in 2017. We expect this rise in real per capita income to continue, increasing to $52,080 in 2019. ♦

Major Industries

It is expected that almost all industry sectors will add jobs over the next two years. However, the strongest job growth, in terms of number of new jobs, will be in the following industries:

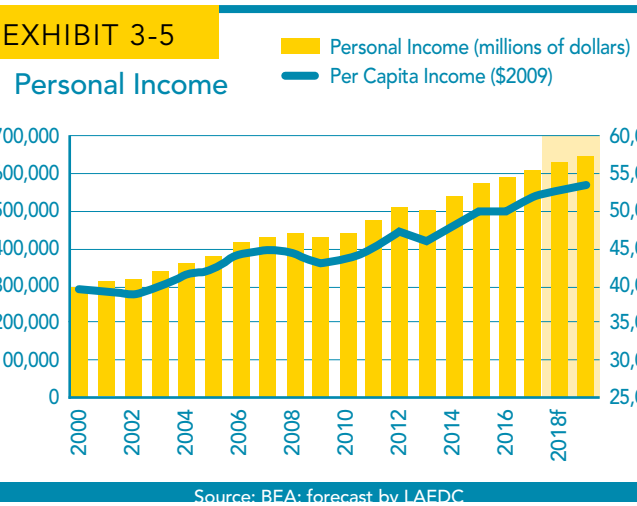
Health Care and Social Assistance: Health care and social assistance is the county's largest industry sector by employment. Approximately 32 percent of jobs in this sector are in ambulatory health care, such as doctors'

EXHIBIT 3-4



Source: California Home Building Foundation; CIRB; forecast by LAEDC

EXHIBIT 3-5



Source: BEA; forecast by LAEDC

[3] *Data points for 2017 were imputed or estimated depending on the availability of relevant data. For example, the California Employment Development Department (EDD) data, drawn from the U.S. Bureau of Labor Statistics, for Occupational Employment Statistics and Wages (OES) survey has wage data for Q1 2017 but employment data only from 2016. Depending on the data source, there is a lag in data releases due to data collection, estimation and publication requirements.*

offices and clinics, 18 percent are in hospitals, and 37 percent are in social assistance, such as child day care and in home supportive services. As the population continues to grow and age, these industries will need to keep pace to provide adequate health services. The number of health care and social assistance jobs is expected to expand by 15,100 in 2018 and an additional 9,500 jobs in 2019, annual growth rates of 2.3 percent and 1.4 percent, respectively.

Administrative and Support: Approximately 41 percent of the jobs in this sector are in employment services, such as temporary employment agencies. As more industries come to utilize and rely on staffing and employment agencies, this sector will continue to grow. It is becoming more common for firms to add workers under contractual arrangements rather than adding them to payrolls directly, providing firms more flexibility in terms of staffing needs. Employment in this sector overall is forecast to add 16, 300 jobs through 2019.

Construction: A sure sign of Los Angeles County's strengthening economy is the amount new construction seen across the county, as businesses invest in new buildings and public infrastructure projects begin development. The construction industry is forecast to grow at 3.7 percent in 2018 and 6.4 percent in 2019, adding 14,600 jobs through 2019.

Leisure and Hospitality: Tourism has been a mainstay of the Los Angeles County economy, with almost 50 million visitors arriving into the region annually. Employment in leisure and hospitality industries has posted annual consecutive increases in employment since 2011. However, the lion's share of jobs in this sector is in food services, a relatively low-paying subsector. From 2017 to 2019, the food services subsector is projected to add 18,880 new jobs, growing by 1.8 percent annually on average. Most of the new jobs added will continue to be in food services.

Retail Trade: Retail employment in Los Angeles County has been improving since bottoming out in 2010 with a slight decline of 1,300 jobs from 2016 to 2017. The sector is expected to again add jobs in 2018 and 2019. However, this industry is also undergoing transition as more transactions are conducted online, with fewer customers visiting retail outlets. Growth will be relatively moderate with 4,500 jobs added through 2019.

Government: The public sector is a large employer in Los Angeles County. Local, state and federal governments all have a strong presence here, accounting for roughly 13 percent of all payroll jobs in the county. Unlike other private service industries, the public sector experienced employment declines well after the recession ended, reaching its lowest level in 2013 with 551,200 jobs. From 2014 through 2017, governments added 26,300 jobs to their payrolls, an increase of 4.8 percent. The sector is forecasted to lose 1,100 by the end of 2019, a downtick of 0.2 percent. ♦

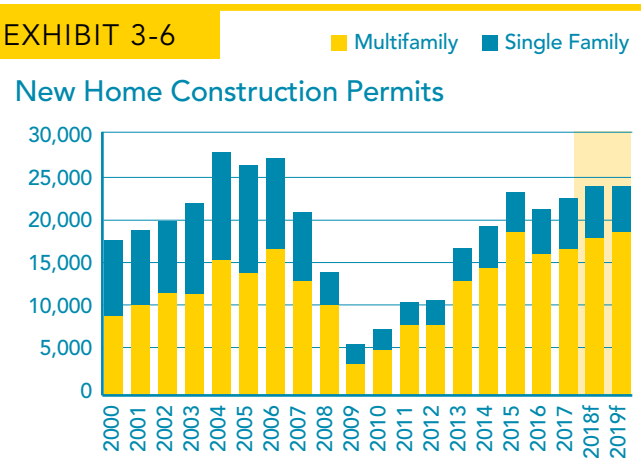
Housing

In 2017, the number of permits issued for new home construction in Los Angeles County increased over the year by 8.9 percent to 22,010 units permitted. New home construction peaked in Los Angeles County in 2004 at 26,935 units permitted before falling to a low of 5,653 units in 2009. Since then, new home construction has increased at a gradual pace, with the exception of 2016.

Of note in the aftermath of the recession is the rising share of permits issued for multi-family homes relative to new single-family construction. Between 2000 and 2005, the share of single-family permits averaged 46 percent of total new home construction. Since then, the share has steadily declined, falling to just 25 percent in 2017.

In 2017, the median home price in Los Angeles County increased over the year by 8.0 percent to an estimated $560,860. The median home price in Los Angeles County has increased by 75 percent since bottoming out in 2011 and ended last year 5.4 percent above its former peak. ♦

EXHIBIT 3-6

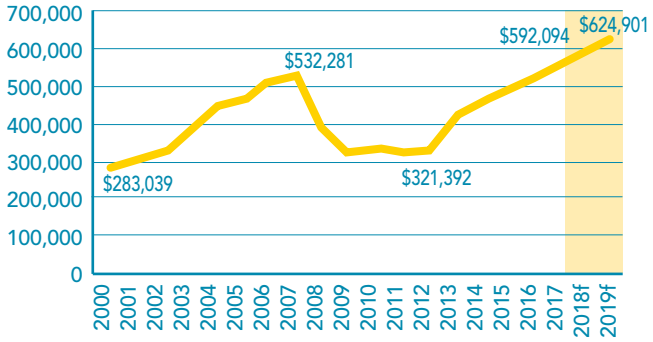


Source: California Home Building Foundation; CIRB; forecast by LAEDC

EXHIBIT 3-7

Los Angeles County Median Home Prices

(New and existing, attached and detached homes)



Source: DataQuick Information Systems; estimates and forecast by LAEDC

EXHIBIT 3-8

Los Angeles County Indicators

	HISTORICAL						FORECAST	
GDP	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018f**	**2019f**
Real GDP (millions $2009 chained)	577,701	587,582	610,332	634,635	649,349	669,975	685,741	700,863
Annual percent change in real GDP	2.9	1.9	3.9	4.7	2.1	3.2	2.4	2.2
Total personal income (millions)	486,734	483,579	514,517	549,073	563,908	585,515	602,632	619,749
Per capita personal income (nominal)	48,818	48,140	50,730	53,521	54,477	57,168	58,818	60,469
Per capita personal income ($2009)	46,048	44,922	46,709	48,836	48,788	50,647	51,328	52,084
Population								
Population (thousands)	9,990	10,056	10,125	10,179	10,215	10,278	10,328	10,382
Population growth rate	0.9	0.7	0.7	0.5	0.3	0.6	0.50	0.50
Labor market								
Unemployment rate (percent)	10.9	9.8	8.2	6.6	5.2	4.6	4.3	4.1
Average annual nonfarm employment	4,034,900	4,111,700	4,188,700	4,281,500	4,390,400	4,447,300	4,495,057	4,529,352
Annual percent change in employment	2.3	1.9	1.9	2.2	2.5	1.3	1.1	0.8
Jobs (change over previous year)								
Total Nonfarm	89,800	76,800	77,000	92,800	108,900	56,900	47,800	34,300
Natural Resources	200	200	-200	-400	-300	-100	100	0
Construction	3600	7,000	3,900	7,700	6,900	6,400	5,200	9,400
Manufacturing	900	1100	-4400	-3,200	-6,400	-4,600	-1,400	-3500
Wholesale Trade	6,100	6,800	3,800	3,200	1,300	1,700	1,300	1,500
Retail Trade	7,900	4,700	7,400	6,200	3,100	-1,300	2,500	2,000
Transport / Warehousing / Utils	2,700	3,000	5,900	8,100	9,100	600	1,100	0
Information	-400	4900	1,800	8,700	23,400	300	2,000	200
Finance & Insurance	1800	-1,900	-3,800	1,100	2500	-200	800	400
Real Estate / Rental & Leasing	600	2500	2,000	3,300	1,700	2,800	900	-100
Prof / Scientific / Tech Services	12,700	8,800	0	0	6500	5,200	2,200	1,200
Management of Companies	1,400	1,500	400	-700	-1000	500	200	-200
Administrative & Support	12,900	12,500	6,000	2,900	4,200	3,400	8,800	7,500
Educational Services	200	3500	1,200	900	3,500	4,600	1000	700
Health Care / Social Assistance	22,000	-900	17400	19,500	22,800	21,800	15,100	9,500
Leisure & Hospitality	21,100	24,700	26,100	22,500	21,400	7,900	7,500	4,700
Other Services	4700	4,000	4,800	500	2,400	6,700	2,300	200
Government	-8,700	-5,600	5,000	12,300	7,800	1,200	-1,900	800
Housing								
Residential permits	10,709	16,200	18,707	22,652	20,213	22,010	23,061	23,143
Median home price				490,083	519,300	560,858	592,094	624,901

ECONOMIC FORECAST & INDUSTRY OUTLOOK

LAEDC
INSTITUTE FOR APPLIED ECONOMICS
Los Angeles County Economic Development Corporation