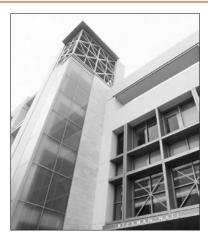
Chapman University



A. Gary Anderson Center for Economic Research

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CHAPMAN UNIVERSITY INLAND EMPIRE ECONOMIC FORECAST

Orange, CA—The A. Gary Anderson Center for Economic Research at Chapman University released today its 2018 economic forecasts for the U.S., California and Inland Empire. Dr. Jim Doti presented the forecasts to Inland Empire business leaders at a conference held at the Riverside Convention Center.

Following is a summary of Dr. Doti's presentation. A more detailed analysis and forecasts are included in the enclosed *Inland Empire Economic Forecast*.

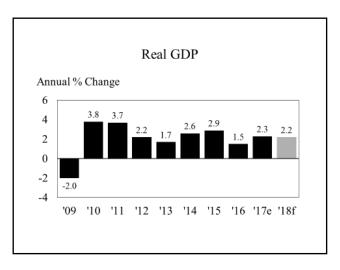
2018 U.S. FORECAST

Overview:

Although cumulative growth during the current expansion has been weak when compared to other recoveries, it is now the second longest expansion on record. The critical question now is whether the expansion can endure in the face

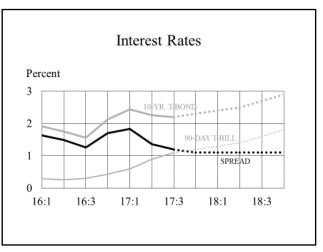
of full employment and falling productivity.

Historically, three economic trends have consistently signaled the end of expansions and onset of recession. Those signals include a negative interest rate spread (short-term interest rates are higher than long-term rates), a sharp drop in housing starts and rising levels of private debt. With none of these recessionary signals in sight, we are confident that the expansion will continue through 2018. The rate of real GDP growth, however, is forecasted to decline slightly from 2.3% currently estimated for 2017 to 2.2% in 2018.



Highlights:

• We believe the Federal Reserve Board will follow through on its earlier intention to raise the fed funds rate before the end of this year. Then we expect two more increases in 2018. The 90-day treasury bill closely parallels that rate and is forecasted to rise from 1.2% to 1.8% by year-end 2018. The 10-year treasury bond is also forecasted to increase about 60 basis points. With short- and long-term rates increasing in lock step, the interest



rate spread is expected to hold steady at 1.1%. Although this is a decline from the 1.8% spread at the beginning of this year, it's not enough to signal an imminent recession.

A drop in housing starts is almost always preceded by increases in the supply of unsold units
as well as greater pessimism on the part of leaders in the housing industry. Recent trends in
these series could hardly be more positive. The supply of unsold inventory at current sales
trends is down to four months, while the National Association of Home Builders' (NAHB)
housing market index is near all-time highs.

Although housing production will be constrained somewhat by declining affordability and limited availability of construction workers, our forecast calls for a continuation of relatively strong levels of 1.2 million housing starts in 2018. This roughly matches the cyclical highs reached in 2017.

Private debt as a percentage of real GDP has held constant near 150% since 2011. In 2018, we see debt increasing. While this increase will not be enough to point to recession, coupled with continuing Fed tightening, it is expected to restrain consumer and investment spending.

And while the global economy is probably in its best overall shape since the recovery began, China's growth will be constrained as a result of its increasing private debt. China's private debt as a percentage of has increased sharply from 115% in 2008 to an estimated 210% in 2017.

2018 CALIFORNIA FORECAST

Overview:

After experiencing sharper job losses and higher unemployment than the U.S. during the Great Recession, California caught up by the end of 2013 and has since outpaced the nation in job growth. But these macro trends mask a number of structural changes in the California economy. In comparison to the U.S., California's manufacturing sector has hardly grown. The state's weakness in this

Job Sector	California	U.S.
Durable Goods Manufacturing	1.6%	6.6%
Nondurable Goods Manufacturing	1.6%	3.6%

33.1%

20.3%

16.8%

-3.3%

Change in Payroll Jobs, 09:2 to 17:3

sector, however, has been more than offset by very strong relative growth in construction and information services jobs. These sharp swings in the pattern of job creation point to California's shedding of lower value-added manufacturing jobs to higher value-added jobs in information services. The swings also suggest that California is becoming increasingly dependent on the cyclical and volatile construction sector.

Construction

Information Services

The table at the right summarizes the forecasted impact of the major engines of economic growth in California. The most important variable, real GDP, is forecasted to show little change, while declines in the other variables are mild.

As a result, we are forecasting a slight decline in California employment growth from 1.7% in 2017 to 1.5% in 2018.

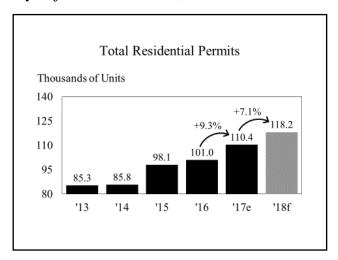
Job Growth in California				
		Impact on CA Job Growth		
2.3%	2.2%	⇔		
	% Change	2017e 2018f % Change % Change 2.3% 2.2%		

Variables Influencing

	2017e % Change	2018f % Change	CA Job Growth
Real GDP in the U.S.	2.3%	2.2%	⇔
Real Imports in the U.S.	3.3%	2.1%	+
Total Building Permit Valuation in California	5.8%	5.2%	•
Information Services Jobs in Silicon Valley	2.8%	2.2%	•
CA Payroll Employment	1.7%	1.5%	

Highlights

- California's manufacturing sector is certain to show additional weakening in 2018. Not only is the manufacturing sector declining nationally as jobs move offshore, but it will be
 - increasingly difficult for California's manufacturing industry to compete against lower-cost regions in the U.S.
- The supply of unsold resale homes is near historic lows, which suggests a future uptick in construction activity. Given rising mortgage rates, however, housing affordability is forecasted to continue its downward slide. These countervailing indicators lead our forecast to call for solid growth in residential permits in 2018 but at a slower rate than 2017's pace.

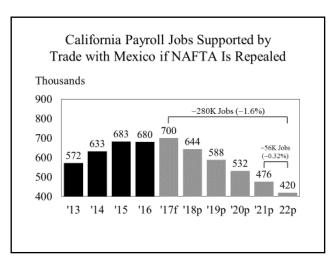


• Proposals to gut NAFTA have the potential to sharply cut into California's economic growth. This, at a time when the state's ability to create jobs is already on the wane.

Since NAFTA's creation in 1995, California's exports to Mexico increased from \$6.5 billion

to \$25.3 billion in 2016. Imports increased even faster, from \$9.0 to \$46.3 billion. Moving these imports from Mexico to market creates thousands of jobs in California.

It is estimated that U.S. trade with Mexico will eventually decline by up to 40%, if President Trump succeeds in gutting NAFTA. Our Chapman Model suggests that such a decline over five years will lead to an annual loss of 56,000 jobs in California for a total loss of 280,000 jobs. That represents a job loss of 1.6% over five years.



• The Republican-sponsored income tax reform would reduce the tax advantages of owning a

home, leading to a decline in the amount a prospective buyer is willing to pay for a home. A recent study done jointly by Chapman's Anderson Center for Economic Research and Hoag Center for Real Estate and Finance reported the impact of the proposed reform on the median home price for all California counties. Selected counties are shown in the table at the right. See also Chapman press release, "The Impact of the House Tax Plan on California Counties' Home Prices," dated November 21, 2017. (https://blogs.chapman.edu/press-room/)

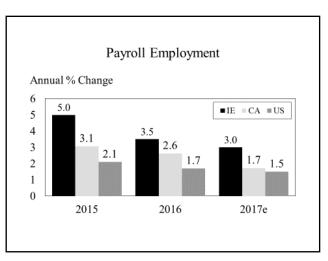
Impact of Tax Reform on Median Home Prices in California

County	Current Median Home Price	Tax Reform Impact on Price
San Bernardino	\$315,000	-1.1%
San Diego	\$535,000	-4.8%
Los Angeles	\$575,000	-6.7%
Orange	\$685,000	-8.7%
San Francisco	\$1,233,929	-13.0%

2018 INLAND EMPIRE FORECAST

Overview

The malaise that the Inland Empire endured during the last recession was more severe than that of the U.S. or California. The unemployment rate reached a peak of 14.4 percent in July 2010, while the highest unemployment rate for the U.S. and California reached 10 percent and 12.2 percent respectively. So it is not surprising that payroll employment in the Inland Empire has been growing at a higher rate in the last few years compared to the U.S. and California as the accompanying chart

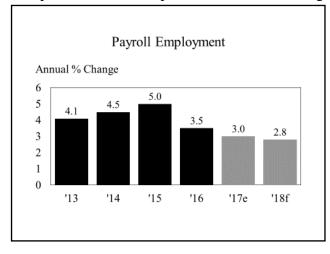


indicates. The Inland Empire has been digging out of a deeper bottom. Although payroll employment is expected to grow at a 2.8 percent pace in 2018, lower than the 2017 growth rate, this rate is still above that of the U.S., California and even Orange County.

In 2017, construction was the leading sector as far as job growth is concerned, the same way it has been for the last several years. Payroll jobs in construction are forecasted to increase by 10 percent in 2018 below the sizzling 2017 rate of 15.5 percent. The Transportation & Warehousing

sector is also forecasted to grow at a high rate as the Inland Empire proves to be a major hub for warehousing due to the availability of moderately priced land and its proximity to Los Angeles and Long Beach ports.

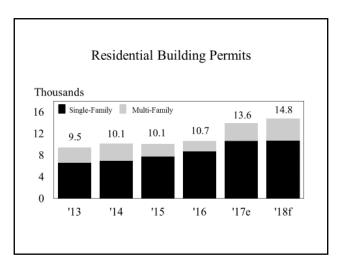
Housing prices and employment are forecasted to grow at higher rates in the Inland Empire compared to those of California and Orange County.



Highlights

Total residential permits increased by a hefty 27.7% in 2017. Although this rate is expected to drop to 9 percent in 2018, it is still a high rate of growth that will generate a sizable increase in construction jobs. Single-family permits are expected to constitute the largest share of total permits, although their rate of growth in 2018 will be lower than that of multi-family permits.

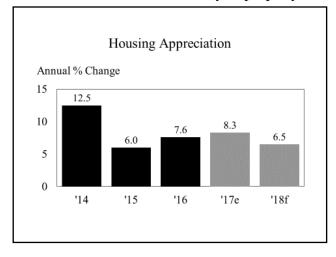
Median single family housing prices decreased from \$383,130 in 2006 to \$161,633 in 2009, a 57.8 percent decrease.



Housing prices have since recovered and are estimated to reach a median of \$337,876 in 2017. The rate of increase has been above that of California and Orange County due to the very low value reached in 2009. In 2018, housing prices are forecasted to increase by 6.5 percent. This increase would have been higher were it not for the limitation of the deductibility of property

taxes imposed in the new tax legislation and the expected increase in mortgage rates by the end of this year.

Other sectors of the economy where payroll employment will show high growth rates are Mining & Natural Resources which are forecasted to grow at 4.3 percent, and Education & Health Care and Leisure & Hospitality which are forecasted to grow at 3.1 and 3.2 percent respectively.



ABOUT THE ANDERSON CENTER FOR ECONOMIC RESEARCH

The A. Gary Anderson Center for Economic Research (ACER) was established in 1979 to provide data, facilities and support to encourage the faculty and students to engage in economic and business research of high quality, and to widely disseminate the results.

ANNUAL SCHEDULE OF CONFERENCES AND PRESS RELEASES

JANUARY
• Economic Forecast Conferences for the Inland Empire

California Purchasing Managers Survey

MARCH California Consumer Sentiment Survey

APRIL California Purchasing Managers Survey

JUNE Economic Forecast Update Conference for the U.S., California, and

Orange County

California Consumer Sentiment Survey

JULY California Purchasing Managers Survey

SEPTEMBER - California Consumer Sentiment Survey

OCTOBER • California Purchasing Managers Survey

NOVEMBER -- California Leading Employment Indicator

DECEMBER - California Consumer Sentiment Survey

Economic Forecast Conference for the U.S., California and Orange

County