

QUARTERLY ECONOMIC REPORT

RIVERSIDE & SAN BERNARDINO COUNTIES, CALIFORNIA

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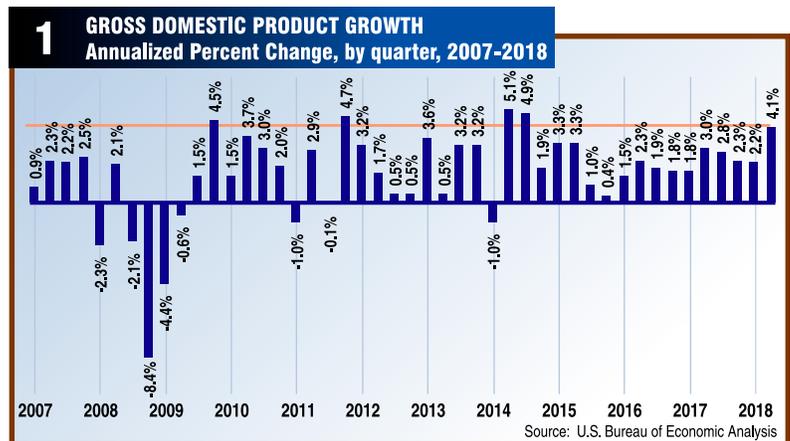
JULY 2018

\$5.00

MID-YEAR LOOK AT INLAND EMPIRE ECONOMIC DRIVERS

John E. Husing, Ph.D.

In July 2018, there is a great deal of change in the forces impacting the potential future of the Inland Empire's economy. Much of this is coming from the national level where the current behavior of the economy is very strong, propelled by the massive \$1.3 trillion tax cut and decreases in federal regulations. These have raised the second quarter 2018 Gross Domestic Product by 4.1%, the fifth fastest level since late 2009 (*Exhibit 1*).

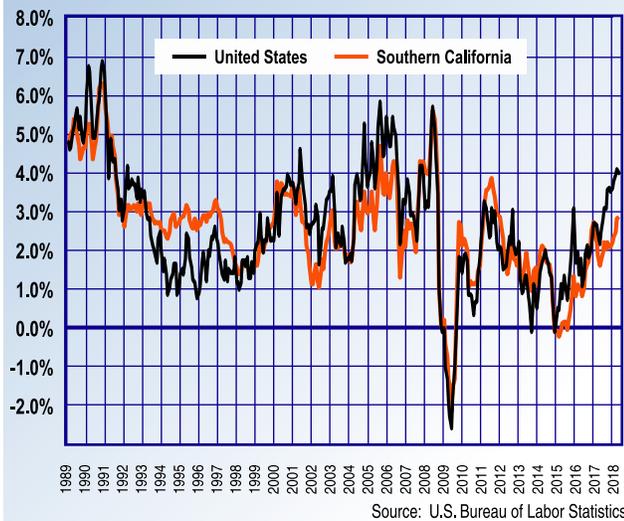


As the inland economy swims in an ocean of national forces, this has contributed to strong local growth. However, the President's use of tariffs to impact international trade raises the possibility of significant local economic disruptions. This is a concern since the Inland Empire's employment is heavily dependent on handling imported goods through its logistics sector which added 84,193 new jobs from 2011-2018 (*see Exhibit 16*). That powerful local job growth would be adversely affected if a trade war ensues. ■

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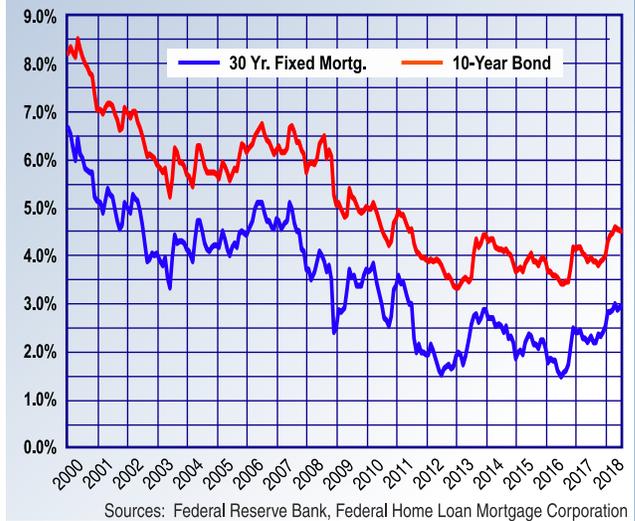
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2 U.S. CONSUMER PRICE INDEX 1989-2018



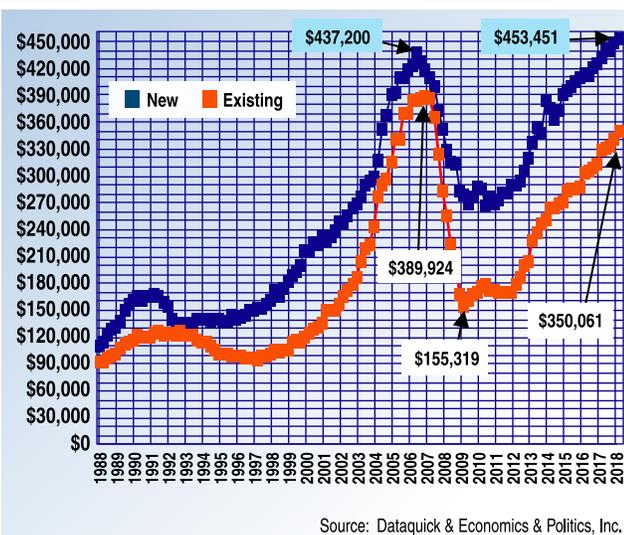
Inflation Picking Up Speed. Meanwhile, the Federal Reserve Board's (*Fed*) actions could provide difficulties for the U.S. and the Inland Empire. As U.S. economic growth takes off, at a time when the seasonally adjusted U.S. unemployment is just 4.0% (see *Exhibit 10*), the Fed is continuing to gradually increase the short term interest rates they control. The purpose is to ensure that growth does not outrun the ability of the country's economic capacity to produce goods and services. Their fear is that this will cause inflation, which now sits at 2.9%, to accelerate. Southern California's inflation rate already stands at a rapid 4.0%.

3 30 YEAR MORTGAGE RATE & 10 YEAR BOND 2000-2018



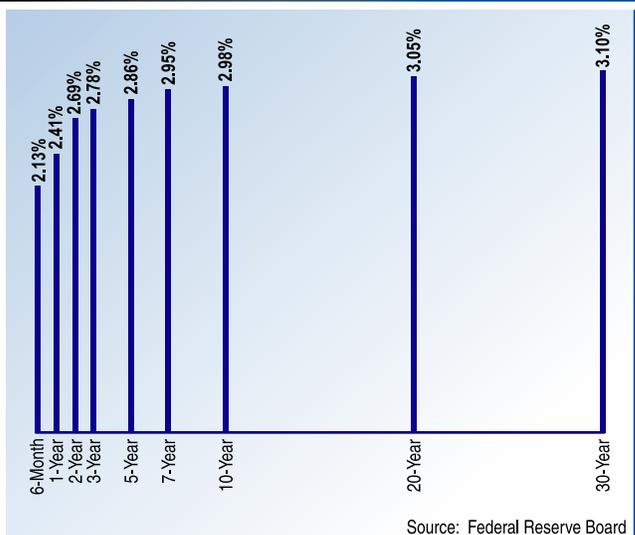
Mortgage Rates Rising. The combination of the federal deficit as well as the Fed's increases in short term interest rates is starting to showing up in long term rates. The 10-year bond now yields 2.98% and has pushed the Freddie Mac mortgage rate up to 4.54%. That rise will make housing less affordable for potential Inland Empire buyers by raising the monthly mortgage payments of potential home buyers. This is a problem for construction firms and realtors as rising prices have already made local new and existing homes expensive to buy.

4 PRICE TRENDS, NEW & EXISTING HOMES Inland Empire, 1988-2018, Quarterly



Rising Home Prices. In second quarter 2018, the Inland Empire's median priced new homes reached \$453,451. That was 3.7% above the pre-recession high of \$437,200. Importantly, it was \$47,500 or 11.7% above the FHA loan limit that allows residential buyers to use that agency's low down payment/low rate programs thus hurting new home sales. For existing homes, the median price was \$350,061. This remains -10.2% below the record high before the recession (\$389,924). Still, these homes are affordable to only 43% of local residents. Rising mortgage rates will raise monthly payments, further decreasing the affordability of Inland Empire homes.

5 INTEREST RATE YIELD CURVE July 26, 2018



Yield Curve & Recession Forecast? Potentially more threatening to the economy is the "flat" interest rate yield curve. Today, savers in U.S. bonds earn 2.13% for tying up money for 6-months as the Fed's raises short rates due to inflation worries. 10-year bonds earn just 2.98%. That low rate is affected if private firms are not borrowing long term for projects, fearing the economy might slow. The difference is just 0.85% earned for investing 20-times as long. Should these rates invert (*short rates rising above long ones*), the shift could predict a recession. This could occur if the Fed continues moving short rates higher (*as announced*), while long term potential borrowers continue fearing a coming slowdown.

6 INDUSTRIAL ELECTRICITY, CENTS/kWh Western U.S. States, May 2018



Source: U.S. Energy Information Agency, Electrical Table 5.6A

High CA Electrical Costs. California issues also affect the Inland Empire's prosperity. This is the case with the state's very high energy costs. In May 2018, the state's industrial price per kilowatt hour was 12.64¢. That was 74.6% above the second highest rate among western states in Colorado (7.24¢). It was 83.5% above adjacent Arizona (6.89¢) and 135.4% above Nevada (5.37¢). These rates make it very difficult for California's manufacturers to compete. It is a reason only 13,467 local production jobs were created in the eight years from 2010-2018 with none added so far in 2018.

7 NATURAL GAS PRICES, MANUFACTURING Western U.S. States, Dollars per 1,000 Cu. Ft., May 2018



Source: U.S. Energy Information Agency

Natural Gas Costs. California's situation with regards to industrial natural gas prices per 1,000 cubic feet (\$6.04) is much better than with electricity. In May 2018, three western states were more expensive: Washington (\$7.67), adjacent Arizona (\$6.56) and Oklahoma (\$6.50). In adjacent Nevada (\$5.95), the price was just lower. The other eight western states were also less expensive, ranging from Montana (\$5.88) to Texas (\$3.11). Looking long term, there is a significant push in the state legislature to move it away from natural gas to electricity. In terms of price, this would put California regions like the Inland Empire at a competitive disadvantage.

8 WEST TEXAS INTERMEDIATE CRUDE PRICES Monthly Average, 2000-2018



Source: U.S. Energy Information Agency

Oil Prices. Given the importance of logistics to the Inland Empire's economy, a key national metric is the price of oil. This fell to just \$30.32 per barrel of West Texas Intermediate Crude in February 2016. Since then, oil prices have risen fairly consistently reaching \$70.98 in July 2018. With oil prices having more than doubled (up 134%), the cost of diesel to truckers has increased dramatically in the last two years. In addition, California now adds taxes of 40.1¢ per gallon to diesel costs.

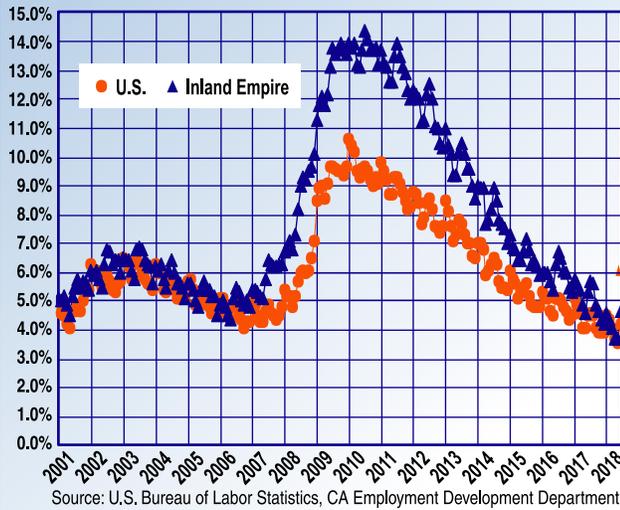
9 DIESEL PRICES BY WESTERN STATES Per Gallon, July 30, 2018



Source: AAA Gas/Diesel Prices

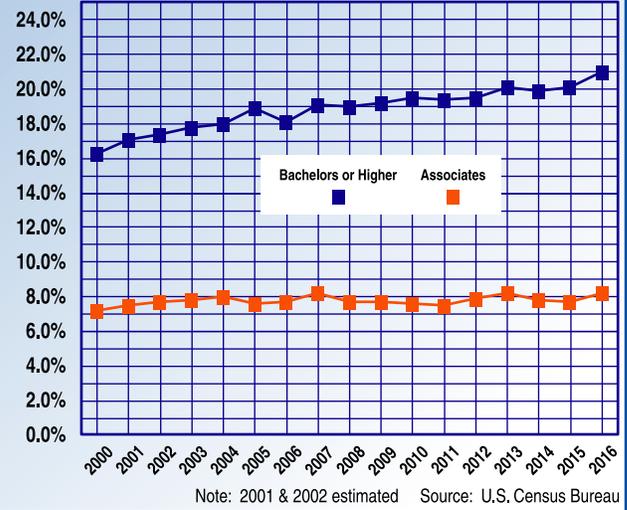
Diesel Fuel by State. As with most cost measures, California's diesel fuel costs are the highest among the competitive western states. On July 30, 2018, the average cost of a gallon of diesel fuel was \$3.94. That was 11.0% higher than second place Washington (\$3.55). In Southern California, it was 17.3% above adjacent Nevada (\$3.36) and 21.7% above Arizona (\$3.10). Again, this is partly due to the high level of the state's diesel fuel tax as well as the 9.25% sales tax applied to each gallon. Gasoline prices on regular fuel to consumers have been similarly affected.

10 UNADJUSTED EMPLOYMENT HISTORY U.S. & Inland Empire, 2001-2018



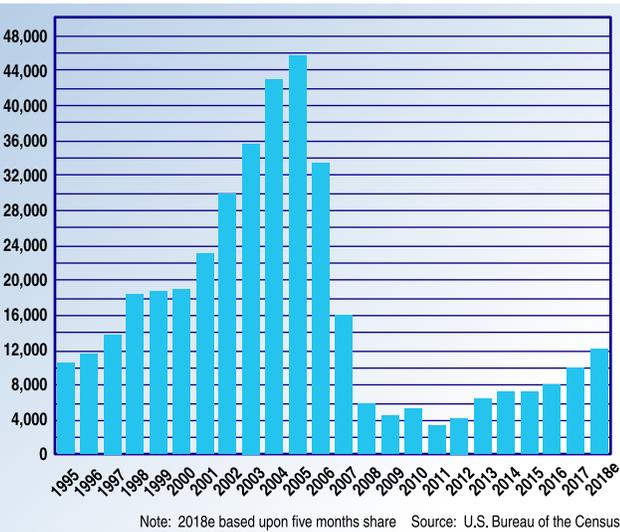
Unemployment Rates. At its peak, the non-seasonally adjusted Inland Empire unemployment rate was 14.4% in July 2010. That was far above the 9.7% rate for the U.S. that month. By June 2018, the two rates had fallen dramatically. It reached 4.7% in the Inland Empire, down -9.7% from its peak. Nationally, the rate was down to 4.2%, off -5.5%. The greater decline in inland unemployment is a sign that the area's economy has actually outperformed the U.S. These facts mean that most local and national workers who have been willing and able to work have found jobs. Many of the unemployed are those who recently started looking for work.

11 BACHELOR'S DEGREE OR HIGHER OR ASSOCIATES DEGREE Share of Adults, Inland Empire, 2000-2016



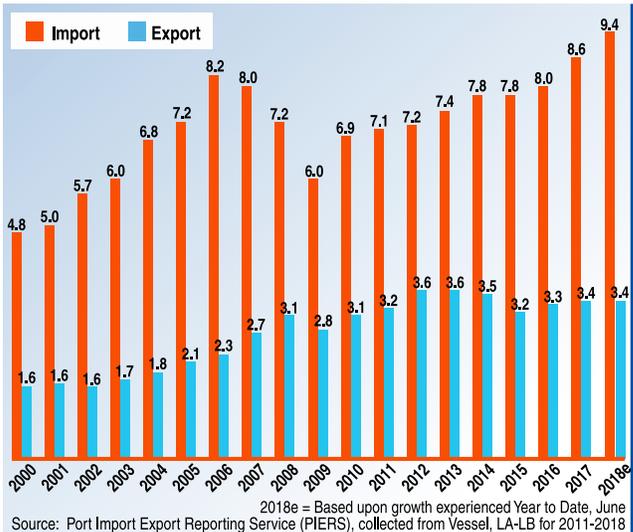
Adults With Degrees. In 2000, the share of Inland Empire adults 25 and over with Bachelor's or higher degrees was 16.3%. Over time, there has been a slow but relatively consistent increase with it reaching 21.0% by 2016. That is well below the 34.1% for the rest of Southern California, creating a disadvantage for the local area in competing for professional and technical sectors. In 2000, the inland share of adults with Associates degrees was 7.2%. That reached 8.0% in 2007 and only moved to 8.1% in 2016. Still, that is above the 7.4% for the rest of the Southland. This metric gives the Inland Empire an advantage in competing for firms needing middle managers or technicians.

12 SINGLE FAMILY RESIDENTIAL PERMITS Inland Empire, 1995-2018e



Single Family Permits. From 2000-2005, Inland Empire permits for single family homes rose from 18,998 to 45,792. This was the period when mortgage standards became increasingly suspect. From that peak, the number plunged to just 3,453 in 2011. Since then, builders have become a little more optimistic each year with permit volume reaching an estimated 12,168 for 2018. That puts the volume back in the 1996-1997 range. Where builders once created homes expecting buyers to show up, they are now only active when they know qualified buyers exist. Construction jobs have thus not returned to their former heights.

13 IMPORT & EXPORT VOLUME, 2000-2018e Ports of Los Angeles & Long Beach (mil. teus)



Port Container Volumes. One of the two metrics driving the Inland Empire's logistics job growth is the volume of containers going through the ports of Los Angeles and Long Beach. In 2018, the imported volume is on track through six months to reach a record 9.4 million 20-foot equivalent containers (teus). This flow drives the inland logistics job growth. It will shatter the 2017 record (8.6 million). Exported container volume has been relatively flat at 3.4 million teus. The concern for the Inland Empire is that the President's willingness to risk trade wars could significantly lower the import volume and harm job growth in the local region.

INLAND EMPIRE JUNE 2018 JOB GROWTH

For June 2018, the 43,400 job gain was led by logistics (12,400; 7.1%), employment agencies (4,000; 9.4%), K-12 education (3,500; 2.6%) and construction (3,300; 3.3%). The June 2018 unemployment rate of 4.7% was down from 5.3% in June 2017. The number of unemployed fell by -11,800 (-11.0%) largely because an extra 19,700 people went looking for work (1.0%) while 31,600 residents found jobs either locally or in Southern California's coastal counties (1.7%). The job gain from June 2017-2018 was the slowest in the first half of the year.

ANNUALIZED JOB GROWTH

Based on the 3.5% growth rate for the first half of 2017-2018, the Inland Empire is on track in 2018 to add another 50,728 jobs, a 3.5% increase (Exhibit 15).

It would mark the sixth year in a row that local employment will have increased by over 45,000. This would put the inland area's job base at 210,402 above its peak in 2017 or 16.1% higher than that pre-recession level. The recession cost the area -140,650 jobs from 2008-2010 but the gain from 2011-2018 has been more than double that loss, up 351,052.

SECTOR JOB GROWTH

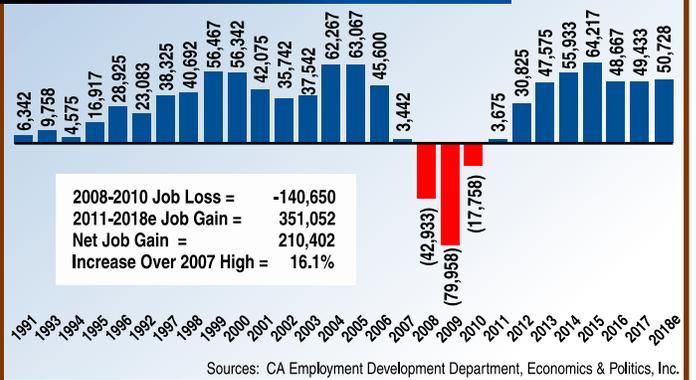
In the turnaround and expansion period including 2011-2018, the Inland Empire has created 351,052 new jobs (Exhibit 16). This growth has been led by 84,193 new jobs in distribution and transportation, a 23.9% share. It is a moderate paying sector (\$45,000-\$60,000). Next has been construction, up 45,084 or a 12.8% share, another moderate paying group. Eating and drinking added 37,031 representing 10.5% of the growth. It is a lower paying sector (\$30,000 and below). Health care growth ranked fourth, up 34,181 jobs (9.7% share). It is a higher paying sector (\$60,000 and above). These four sectors were responsible for over half of all new jobs in the region over starting in 2011 (57.0%).

14 INLAND EMPIRE EMPLOYMENT INFORMATION 2017-2018

Sector	Apr-2018	May-2018	Jun-2018	Jun-2017	Change	Percent
Higher Education	22,300	21,700	21,500	18,700	2,800	15.0%
Mgmt & Professions	49,300	48,700	48,600	47,100	1,500	3.2%
Local Government	79,700	81,600	81,600	79,400	2,200	2.8%
Utilities	5,100	5,100	5,100	5,000	100	2.0%
Health Care	137,100	137,800	137,500	134,900	2,600	1.9%
Federal & State	38,300	38,300	38,400	38,100	300	0.8%
Mining	900	900	900	900	0	0.0%
Information	11,200	11,100	11,100	11,200	(100)	-0.9%
Clean Work, Good Pay	343,900	345,200	344,700	335,300	9,400	2.8%
K-12 Education	139,200	140,600	138,200	134,700	3,500	2.6%
Financial Activities	44,800	45,200	45,000	44,300	700	1.6%
Clean Work, Moderate Pay	184,000	185,800	183,200	179,000	4,200	2.3%
Logistics	186,100	186,700	187,700	175,300	12,400	7.1%
Construction	100,700	101,600	101,900	98,600	3,300	3.3%
Manufacturing	98,700	99,100	99,800	99,600	200	0.2%
Dirty Work, Moderate Pay	385,500	387,400	389,400	373,500	15,900	4.3%
Employment Agcy	46,100	46,800	46,400	42,400	4,000	9.4%
Amusement	20,900	21,000	19,800	18,700	1,100	5.9%
Admin. Support	56,600	55,600	56,900	54,500	2,400	4.4%
Social Assistance	72,600	72,200	72,600	69,700	2,900	4.2%
Other Services	46,400	46,800	47,000	45,900	1,100	2.4%
Retail Trade	183,300	183,700	182,600	178,700	3,900	2.2%
Eating & Drinking	132,100	132,300	130,900	129,400	1,500	1.2%
Accommodation	18,000	18,200	18,100	18,700	(600)	-3.2%
Agriculture	14,900	14,900	16,500	18,900	(2,400)	-12.7%
Lower Paying Jobs	590,900	591,500	590,800	576,900	13,900	2.4%
Total, All Industries	1,504,300	1,509,900	1,508,100	1,464,700	43,400	3.0%
Civilian Labor Force	2,019,800	2,020,100	2,031,600	2,011,900	19,700	1.0%
Employment	1,944,200	1,946,100	1,936,400	1,904,800	31,600	1.7%
Unemployment	75,600	74,000	95,200	107,000	(11,800)	-11.0%
Unemployment Rate	3.7%	3.7%	4.7%	5.3%	-0.8%	-11.9%

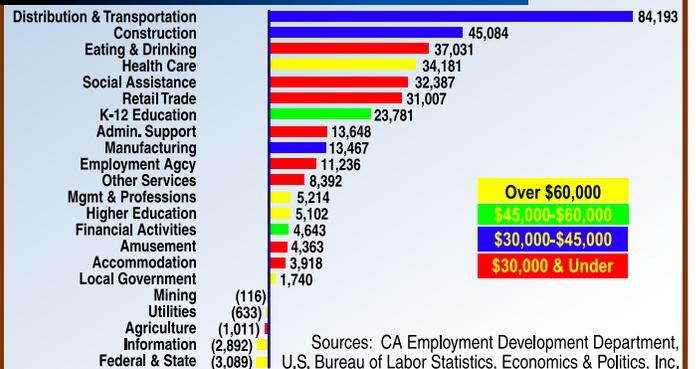
Source: CA Employment Development Department

15 WAGE & SALARY JOB CHANGE Inland Empire, Annual Average, 1991-2018e



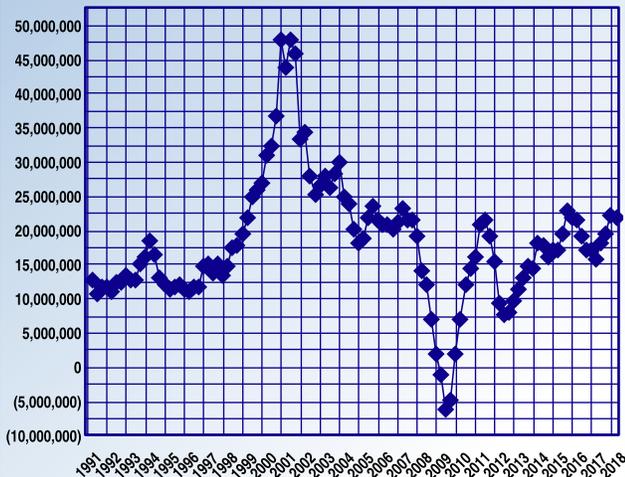
Sources: CA Employment Development Department, Economics & Politics, Inc.

16 INLAND EMPIRE GROWING & DECLINING SECTORS Annual Average 2011-2018e



Sources: CA Employment Development Department, U.S. Bureau of Labor Statistics, Economics & Politics, Inc.

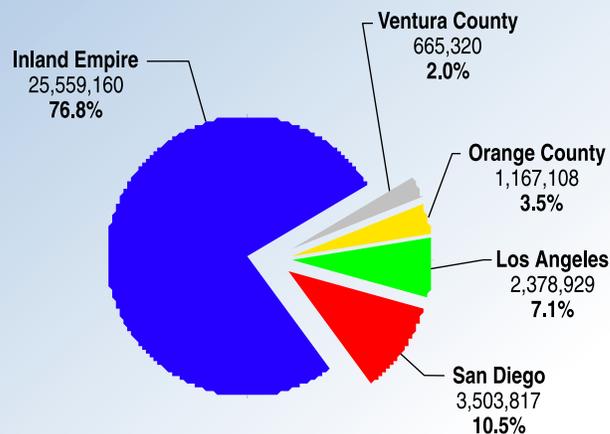
17 INDUSTRIAL SPACE NET ABSORPTION Inland Empire Area, 1991-2018 (moving 4-quarter total)



Source: Grubb & Ellis to 2011, CB Richard Ellis 2012-2018

Industrial Real Estate Trends. In the four quarters ended in June 2018, a net of 21.9 million square feet of industrial space was taken by firms deciding to enter or expand operations in the Inland Empire. The level has returned to its long term capacity since 2005. The rise has occurred in part because a great deal of new space has become available and has been occupied. The net absorption is occurring largely because e-commerce and port-related operations need large facilities to handle their operations. Vacancy levels in Los Angeles and Orange counties are only 1.2% and 1.5% respectively.

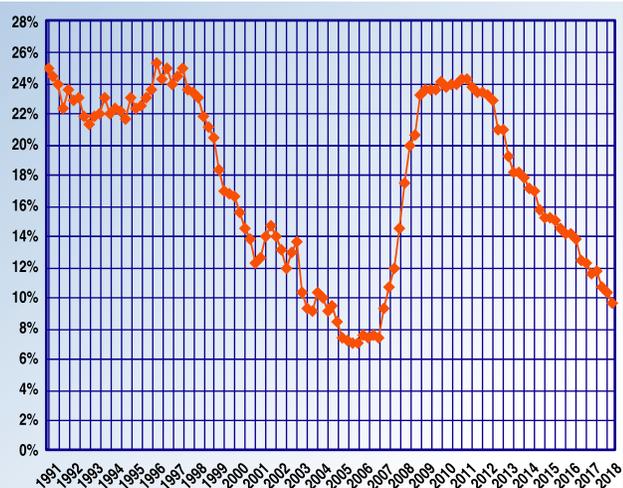
18 INDUSTRIAL SPACE UNDER CONSTRUCTION Southern California Market, June 2018



Sources: CB Richard Ellis

Industrial Construction. With net industrial space absorption continuing to be strong, developers continue to expand construction in the Inland Empire. In June 2018, there was 25.6 million square feet being built. That was 76.8% of the Southern California total. San Diego County saw 3.5 million square feet being built (10.5% share). It was only 2.4 million in Los Angeles County (7.1% share) and just 1.2 million square feet in Orange County (3.5% share). Prices for space per square foot a month were: Inland Empire (\$0.53), Orange (\$0.82), Los Angeles (\$0.89) and San Diego (\$0.91).

19 OFFICE VACANCY RATE Inland Empire Area, 1991-2018



Source: Grubb & Ellis to 2011, CB Richard Ellis 2012-2018

Office Market. After surging to 24.0% in first quarter 2010 during the Great Recession, the Inland Empire office vacancy rate is slowly absorbing the space that was vacant. By 2nd quarter 2018, the vacancy rate was been more than cut in half to 9.7%. Still, no space is currently under construction. The vacancy rate compares to 13.4% in Los Angeles County, 10.7% in Orange County and 10.6% in San Diego County. The inland area's average asking lease rate for all types of space was \$1.93 per square foot per month. In the coastal counties, the asking average rates were Orange (\$2.90), San Diego (\$2.95) and Los Angeles (\$3.55).

20 HOME PRICES, SOUTHERN CALIFORNIA MARKETS Median Priced New & Existing Home, 2nd Quarter 2018



Source: Dataquik

Home Price Advantage. The very large Inland Empire housing price advantage compared to the coastal counties continued in second quarter 2018. For the area, the combined new and existing median home price of \$334,000 in San Bernardino Co. ranged from \$294,000 less than San Diego Co. (\$628,000) to \$302,000 less than Los Angeles Co. (\$636,000) and a huge \$481,000 below Orange Co. (\$815,000). Riverside County's \$387,000 median price was \$241,000 below San Diego Co., \$249,000 below Los Angeles Co. and \$428,000 less than Orange Co. The inland area's housing affordability to local residents was 52% in San Bernardino Co. and 39% in Riverside Co. In the coastal counties affordability was down to 21% in Orange Co., 26% in San Diego Co. and 28% in Los Angeles County.

21 HOME PRICES 2nd Quarter, 2017-2018

County	2nd Qtr-17	2nd Qtr-18	% Chg.
NEW HOMES			
Riverside	\$424,500	\$429,000	1.1%
San Bernardino	443,000	487,000	9.9%
Los Angeles	665,500	648,000	-2.6%
Orange	813,500	948,500	16.6%
San Diego	627,000	686,000	9.4%
Ventura	621,250	652,750	5.1%
So. California	\$599,800	\$639,100	6.6%
EXISTING HOMES			
Riverside	\$358,000	\$380,000	6.1%
San Bernardino	292,000	312,000	6.8%
Los Angeles	585,000	635,000	8.5%
Orange	750,000	790,000	5.3%
San Diego	587,000	620,000	5.6%
Ventura	619,000	650,000	5.0%
So. California	\$522,800	\$557,300	6.6%

Source: Dataquick

22 HOME DEED RECORDINGS Inland Empire, 2nd Quarter, 2017-2018

NEW HOMES				EXISTING HOMES			
Area	2nd-2017	2nd-2018	% Chg.	Area	2nd-2017	2nd-2018	19.6%
Victor Valley	68	114	67.6%	SB Desert	625	686	9.8%
West of I-15	414	564	36.2%	SB Mountains	787	761	-3.3%
San Bdn-Highland	159	145	-8.8%	East of I-215	557	537	-3.6%
I-15 to I-215	152	128	-15.8%	Victor Valley	1,369	1,319	-3.7%
SB Desert	10	7	-30.0%	San Bdn-Highland	901	853	-5.3%
East of I-215	44	28	-36.4%	West of I-15	1,527	1,389	-9.0%
SB Mountains	8	3	-62.5%	I-15 to I-215	1,136	998	-12.1%
SAN BDNO COUNTY	855	989	15.7%	SAN BDNO COUNTY	6,902	6,543	-5.2%
Moreno Valley	22	102	363.6%	Coachella Valley	1,553	1,705	9.8%
Rural Desert	33	61	84.8%	Rural Desert	597	653	9.4%
Pass Area	129	161	24.8%	Pass Area	470	470	0.0%
I-215 South	282	324	14.9%	I-15 South	1,991	1,825	-8.3%
I-15 South	275	308	12.0%	Corona, Norco	956	871	-8.9%
Riverside	151	128	-15.2%	Moreno Valley	658	590	-10.3%
Corona, Norco	237	194	-18.1%	I-215 South	2,123	1,891	-10.9%
Coachella Valley	106	78	-26.4%	Riverside	1,198	1,054	-12.0%
RIVERSIDE COUNTY	1,235	1,356	9.8%	RIVERSIDE COUNTY	9,546	9,059	-5.1%
INLAND EMPIRE	2,090	2,345	12.2%	INLAND EMPIRE	16,448	15,602	-5.1%

Source: Dataquick

INLAND EMPIRE HOUSING MARKET SOARING PRICES, MODEST SALES

In second quarter 2018, the Inland Empire recorded 16,758 *seasonally adjusted* detached home sales (*Exhibit 23*). This was below the peak of 29,862 in fourth quarter 2005. It was also down by -23.5% from the 2nd quarter 2003 level (21,906) when volumes had yet to move into the mortgage driven surge period. Volume has stayed above the 16,000 level where it has been stuck in recent quarters. Sales have been hurt by a lack of supply, high FICO score requirements and the low ceiling on FHA, Fannie Mae and Freddie Mac conforming loans. The raw data show existing home sales at 15,602 units (*down -5.1% from 2nd quarter 2017*). Quarterly new home sales were up to 2,345 units (*up 12.2% from 2nd quarter 2017*) (*Exhibit 22*).

In second quarter 2018, Riverside County's median new home price was up 1.1% to \$429,000 from a year ago while its existing home price was up 6.1% reaching \$380,000 (*Exhibit 21*). San Bernardino County's median new home price grew by 9.9% to \$487,000; its existing home price rose 6.8% to \$312,000. The existing & new home median prices for the two counties continued to show they remained a significant bargain compared to the coastal counties (*Exhibit 20 discussion, previous page*).

Sales. Riverside County recorded 1,356 new home sales during second quarter 2018, up 9.8% from 1,235 in 2017. As recordings come at the end of escrow, this included many sales from the first quarter. The county's percentage leader was Moreno Valley

(102 sales; 363.6%). Its volume leader was the South I-15 area (324 sales; 14.9%). Riverside County's existing home volume fell -5.1% to 9,059 sales in second quarter 2017-2018. The Coachella Valley had the greatest percentage increase (1,705 sales; 9.8%). The volume leader was the South I-215 area (1,891; -10.9%).

San Bernardino County's second quarter 2017 new home sales rose 15.7% to 989 units from 855 last year. The Victor Valley market was the percentage leader (114 sales; 67.6%). The volume leader was the area west of the I-15 freeway (564 sales; 36.2%). Existing home sales in San Bernardino County fell -5.2% to 6,543 from 6,902 in 2017. The outlying San Bernardino Desert area was the percentage leader (686 sales; 9.8%). The area west of the I-15 was the volume leader (1,389 sales; -9.0%).

Prices. Riverside County's second quarter 2018 median new home price of \$429,000 was up 1.1% from last year's \$424,500. It was also above the prior quarter's \$425,000. Its median existing home price was \$380,000, up from \$358,000 the prior year (6.1%) and up from the prior quarter's \$375,000. San Bernardino County's median new home price was \$487,000, up 9.9% from last year's \$443,000. It was above the prior quarter's \$481,000. Its existing median home price of \$312,000 was up 6.8% from \$292,000 a year ago, and up from last quarter's \$300,000. For new and existing home prices in both counties combined, the low was in second quarter 2009. Prices have now risen 119.5% since then. That said, combined prices remain -10.2% below their high in third quarter 2006.

The Future. The Inland Empire's new home sales are very slowly strengthening but remain well below historic volumes as costs are rising, FHA financing is not available for median priced homes and builders remain committed to only building houses they know they can sell. Second quarter 2018 existing home price levels were up powerfully in both counties while new home prices in San Bernardino County surged but grew very slowly in Riverside County. The huge price differentials to the coastal counties continue to widen but lack of supply is inhibiting in-migration to the existing home market and high prices are affecting the new home sales. ■

23 ALL HOME SALES, INLAND EMPIRE Seasonally Adjusted, by quarter, 1988-2018



Source: Dataquick