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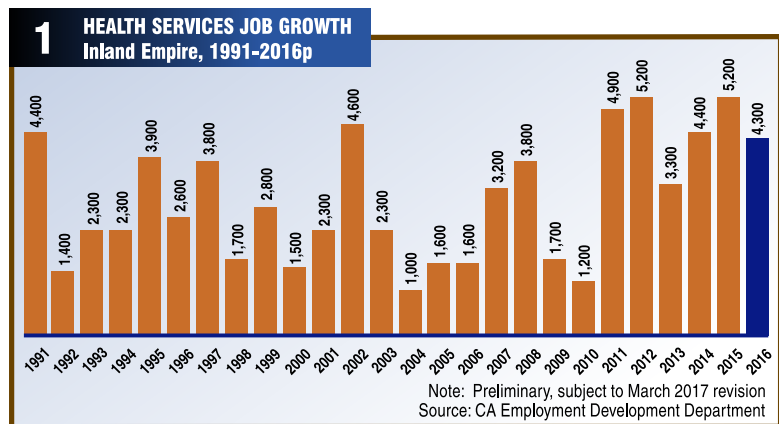
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INLAND EMPIRE JOB GROWTH STRENGTHS & VULNERABILITIES

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There is little disagreement that U.S. economic policies are entering a new era. The policy changes that will emanate from Washington D.C. will likely have a marginal impact on economic performance in 2017 given the time it takes for them to pass and go into effect. It is in 2018 that the major effects will likely be felt. For the Inland Empire, the question is the extent that potential changes will make the area's economy stronger or more vulnerable starting in 2018. Below is a look at the five sectors most responsible for bringing money into the region: health services, logistics, construction, manufacturing and non-health professions.



HEALTH CARE

The health care sector has been the Inland Empire's steadiest source of job growth since at least 1991. Its expansion continued through the aerospace/defense recession of the early 1990s and the Great Recession of 2008-2010 (*Exhibit 1*). In the region's 2011-2016 turnaround and expansion period, it added 27,300 jobs. That was a gain of 26.1% and accounted for 11.6% of all new jobs. The sector offers a wide variety of professional and technical jobs with a strong 2016 median pay of \$59,494.

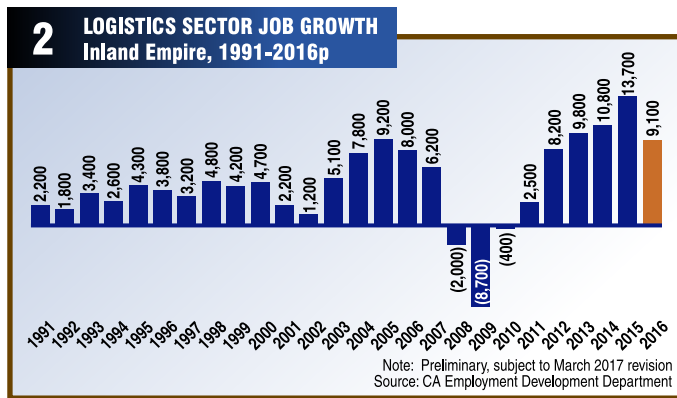
Three factors have been responsible for the health care's employment strength. First, the sector has been hiring to catch up to the state average of residents per health care job. Locally, each worker handled 40.4 people in 2010, dropping to 34.0 in 2015. Still, that remains 27.1% higher than the state average (26.8). Second, the sector has

Continued on page 2

had to deal with a local population which grew by 262,547 people from 2010-2016. Third has been the expansion in health care demand due to the Affordable Care Act (ACA). It has reduced the number of uninsured from 712,217 in 2013 to 365,374 in 2015 (-48.7%) according to the Census Bureau. The key vulnerability for health services is the unknown as to what will happen to the ACA during 2017.

LOGISTICS

The logistics sector has been the Inland Empire's strongest source of job growth during the area's 2011-2016 turnaround and expansion period. In that period, it has added 54,100 jobs (*Exhibit 2*). That was a gain of 49.7% and accounted for 23.0% of all new jobs. The sector is primarily composed of blue collar/technical jobs with moderate



2016 median pay of \$45,456. Three factors have been responsible for the logistics group's employment strength. First has been the expansion of imported trade through the ports of Los Angeles and Long Beach. This reached 8.2 million 20-foot equivalent container units (*teus*) in 2006. Second has been the dramatic 15.0% compound increase in national e-commerce demand with most of Southern California's facilities locating in the Inland Empire. Net industrial space absorption from these two factors has been 92.9 million square feet during 2011 to 2016, with 21.2 million now under construction. A key third strength has been the greater use of technology within the facilities which has caused an increase in the skill and knowledge needed by workers and a commensurate rise in median pay.

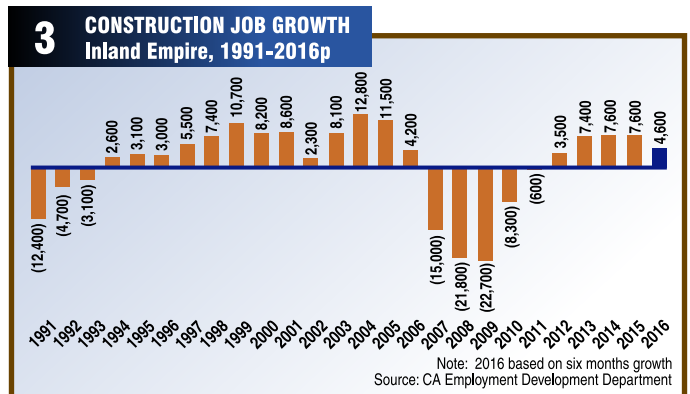
There are three key vulnerabilities for logistics. Nationally, it would be policies to reduce imports either through tariffs or eliminating the ability of retailers and producers to deduct the cost of their imports when determining their profits. Some negative impact appears very likely. Second is pressure by environmentalists on AQMD or CARB rules to pass regulatory rules to stop the Inland Empire expansion of logistics facilities. This is an on-going issue. Third would be the significant reduction in cargo

entering Southern California ports due to the expansion of the Panama Canal. This is unlikely given advent of new huge ships unable to use the canal.

CONSTRUCTION

Historically, the construction sector was the backbone of the Inland Empire's economy and job growth. This changed dramatically once the Great Recession hit the area. From 2007-2011, the sector dropped from 127,500 jobs to 59,100, a loss of -68,400 or -53.6%. From 2011-2016, it grew a net of 30,100 positions to reach 89,800, a strong growth rate of 50.4% and responsible for 12.8% of total new inland jobs (*Exhibit 3*). The 2016 median pay for construction workers was strong at \$51,915. Two factors have largely been responsible for the sector's expansion. First has been strong infrastructure growth. It is one reason for the high median pay as these jobs are "prevailing wage" union positions since they involve governmental funds. This should be a strength going forward if the federal government follows through on a significant expansion of funding for such projects. Second has been the continued expansion of logistics facilities due to the strength of port trade and e-commerce. From 2011-2016, 63.5 million square feet of space has been built or is under construction.

There are three key vulnerabilities for the Inland Empire's construction sector. First is CA's Environmental Quality Act which has been used to delay infrastructure, industrial and large residential projects for years even when funding has been secured. Second, the same set of forces impacting the logistics sector could seriously hamper the construction of their facilities. Third and most importantly, residential projects have lagged. Thus,



there were only 398 new homes under construction in second quarter 2016 despite only 53 such homes standing unsold. New home prices have soared to \$426,000 in San Bernardino County and \$420,000 in Riverside County. In part, the lack of building has been due to fewer permitted lots as well as builder conservatism born out of the

recession. Also, it has been because demand has been lower than normal for a recovery with families unwilling to migrate away from jobs despite a fourth quarter 2016 Inland Empire median price for new and existing inland homes (\$325,000) that was \$236,000 to \$415,000 lower than coastal county prices. Meanwhile, Millennials have been largely absent from the market as their family formation has lagged previous generations.

MANUFACTURING

Once an Inland Empire strength, the manufacturing sector is no longer responsible for serious growth. From 2007-2011, it dropped from 123,400 jobs to 85,100, a loss of -38,300 or -31.0%. From 2011-2016, it grew a net of 13,100 positions to reach 98,200, a strong increase of 15.4% and responsible for 5.5% of total new inland jobs (*Exhibit 4, page 4*). The 2016 median pay for production workers was strong at \$50,106. The sector accounted for 23.9% of California's 39,300 new manufacturing jobs from 2010-2016. One strength is the fact that local leaders embrace the sector. Its space costs (\$0.51 per sq. ft./mo. are) are much lower than coastal counties: Los Angeles (\$0.74), Orange (\$0.84), San Diego (\$0.85). The inland area also has a large blue collar labor force seeking this type of work.

Vulnerabilities for the Inland Empire's manufacturers begin with CA environmental regulations which fall heaviest on this sector and make national firms unwilling to come to the state or expand their production in it. For instance, state mandates have pushed industrial electrical rates to 14.07¢ a kilowatt hour, 61.5% to 203.2% higher than the 21 other western states. Second is the national issue of production moving away from the U.S. and lower cost imports undercutting the ability of American companies to compete. Third has been automation which continues to dramatically reduced the number of workers needed to make goods in the U.S.

NON-HEALTH CARE PROFESSIONALS

Despite the desire by Inland Empire leaders to see sectors like management, engineering and information firms, the professions, utilities and higher education grow, this has not occurred in any serious way. From 2008-2011, the group dropped by a net of -7,400 jobs to reach 80,200, down -9.2%. From 2011-2016, they added a net of 7,400 positions to reach 87,600, a gain of 9.2% and responsible for 2.8% of total new inland jobs in the turnaround and expansion period (*Exhibit 5*). Among the sectors, the strongest 2011-2016 growth was in management and professionals which added 6,700 jobs. This group should increase given the very large population (4.5 million) and

base of firms (103,600) to serve. Also, some strength was seen among colleges which added 2,900 positions. However, the information sector declined by -2,600 jobs and utilities by -300. The 2016 median pay for these high-end workers was very strong at \$69,889.

Vulnerabilities for these higher paying sectors start with the Inland Empire's low share of workers with AA degrees or higher (27.8%). By county, coastal areas were: Los Angeles (37.7%), San Diego (45.0%), Orange (46.3%). It is hard for inland counties to compete for these firms in this situation. Also, the use of the internet for numerous functions once conducted in local offices has allowed professionals to serve the region from their coastal offices. The lack of serious growth in housing has kept engineering and construction office operations from growing significantly.

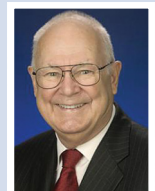
SUMMARY

As has been true for decades, the Inland Empire has tended to outperform California in good times but lag in recessions. That has recently been the case. From 2008-2010, the area lost 140,600 jobs (-10.8%) while the state declined -7.4%. From 2011-2016, it added 235,400 jobs (20.2%) while California grew by 15.2%. As has been shown, the inland area's strength has been in its blue collar/technical sectors plus health care. Its weakness has been in the higher paying non-health related groups. Its strong share of growth in blue collar/technical sectors (40.2%) far exceeded the state's share by that group (19.7%). Interestingly, the result has been a much smaller share of inland growth (38.6%) during the recovery and turnaround in low paying sectors compared to the state (46.7%). Unfortunately, this strength will be a long term vulnerability due to the speed at which automation and regulation is likely to impact blue collar/technical jobs. ■

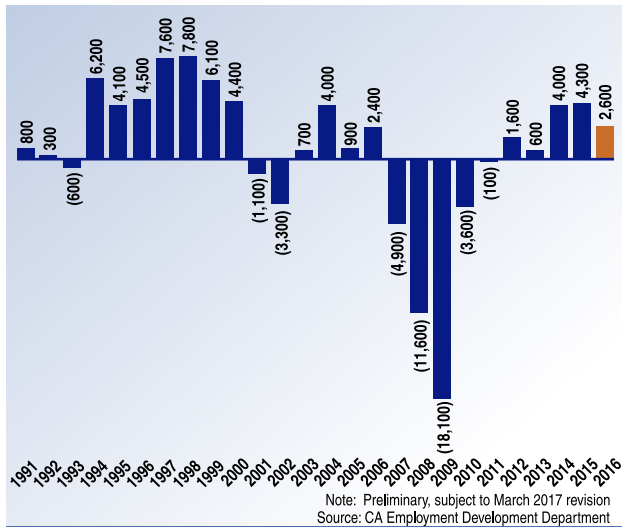
For further information on the economic analysis in the QER, visit Dr. John Husing's website at:

www.johnhusing.com

You'll also find pages on Dr. Husing's background, speaking engagements, downloadable presentations, adventures, and other items of interest.

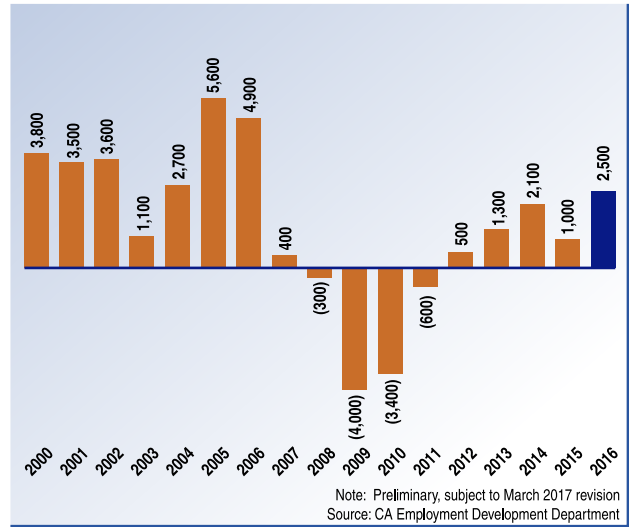


4 MANUFACTURING SECTOR EMPLOYMENT Inland Empire, 1991-2016p



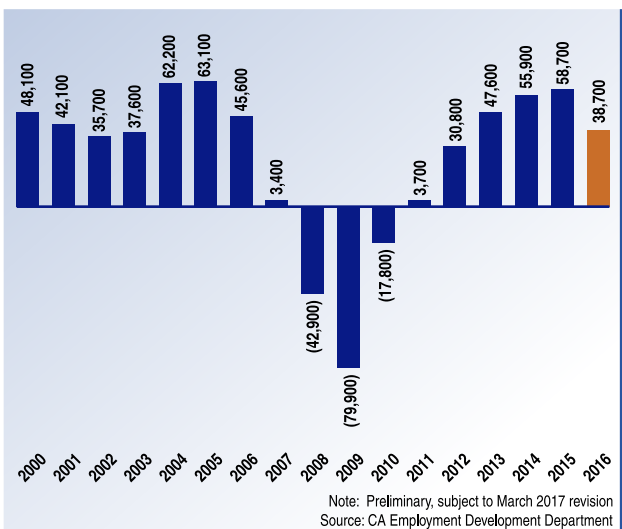
Manufacturing. The Inland Empire's manufacturing employment fell dramatically in the 2007-2011 period, down -38,300 or -31.0%. Subsequently, the sector has grown, up 13,100 positions by 2016 to reach 98,200. That growth was unusual for California in that it represented 32.7% of the state's 40,100 new manufacturing jobs in the 2011-2016 turnaround and expansion period. The sector is a good paying one with 2016 median pay at \$50,106 in the inland area. If the President and Congress are successful in encouraging the sector to expand, the Inland Empire would be the prime beneficiary in California where growth is restrained by environmental policies.

5 PROFESSIONAL, MANAGEMENT, SCIENTIFIC JOB GROWTH Inland Empire, 1991-2016p



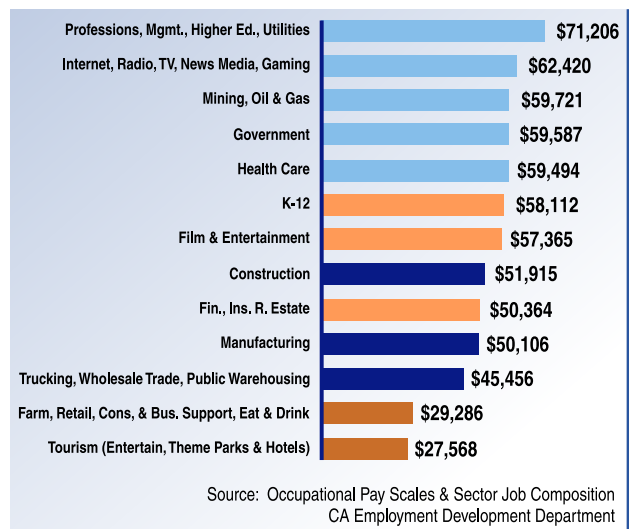
High Paying Non-Government Sectors. A wide variety of high paying Inland Empire sectors include professionals, management firms, mines, utilities and higher education. This diverse group lost -8,300 jobs in the 2007-2011 period (-9.4%). Some had been serving residential construction firms, others had come to serve the large local population and economy. The group has subsequently added back 7,400 positions to reach 87,600. These sectors are ones the region's leaders would generally like to see grow more strongly since together their 2016 median pay was \$69,889. Their general lack of strength has been because only 20% of local adults are four year college graduates and above.

6 WAGE & SALARY EMPLOYMENT GROWTH Inland Empire, 2000-2016p



Total Inland Empire Employment. The recession, turnaround and expansion of jobs at the Inland Empire's firms and agencies has brought its employment to a record 1,401,100 jobs in 2016, up 34,800 jobs or 7.3% from the pre-recession peak of 1,306,300 in 2007. This change included the loss of -140,600 jobs in 2008-2010 but a gain of 235,400 since then. The growth includes a preliminary 2016 gain of a modest 38,700 jobs or 2.8% a little above California's 2.5%. The Inland Empire figure is suspect as the U.S. Bureau of Labor Statistics showed it up 44,700 or 3.3% at mid year. California data is annually revised to BLS levels each March.

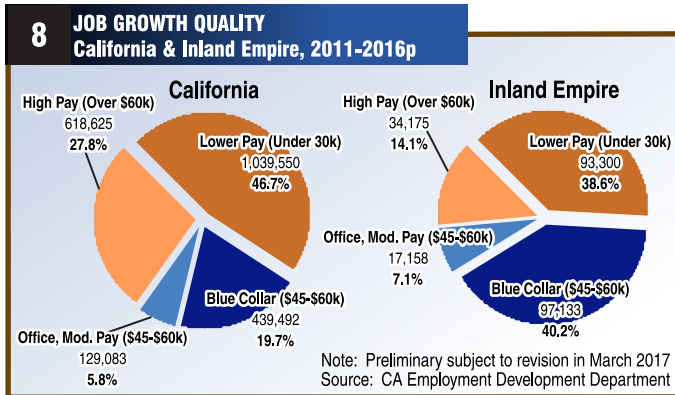
7 MEDIAN PAY LEVEL BY SECTOR Inland Empire, 1st Quarter, 2016



Median Pay By Sector. Median pay is the level at which 50% of the workers in a sector make less and 50% more. It is superior to average pay as it is not pulled to the high side by a small number of very well paid workers. In the exhibit, the "yellow" high paying sectors show workers earning medians of \$59,494 (health care) to \$71,206 (mostly professions and management firms). Earning \$45,456 (logistics) to \$58,112 (K-12) are the blue collar and moderately paid office and education workers in green and blue. In red, are the lower paying sectors earning \$27,568 (tourism) to \$29,286 (population serving and other service groups).

INLAND EMPIRE EMPLOYMENT: Preliminary Job Growth & Quality: Modestly Good

With the twelve monthly estimates of the Inland Empire's job growth from 2015-2016 completed, the difficulty analysts face is that CA Employment Development Department (EDD) estimates (38,733 new



jobs; 2.84%) must now be revised to hard data findings by U.S. Bureau of Labor Statistics (BLS). At mid-year, BLS's put growth at 44,706 jobs, up 3.33%. EDD found 3.28% job growth at mid-year slowing to 2.41% in the second half, an unusually strong drop. Still, the annual averages from EDD's surveys gives an idea of the share of growth in 2016 for each sector (Exhibit 9).

CLEAN WORK, GOOD PAY: 9,175; 2.8%

Job growth from 2015-2016 in sectors that pay a median of over \$60,000 (yellow) is estimated at 9,175, up 2.8% from 2015-2016 and 23.7% of new jobs. Health care led, up 4,342 (3.4%). Local government grew by 1,682 positions (2.3%). High education's growth was 1,408 (7.8%). Management and professions added 1,083 jobs (2.2%). Federal and state government grew a little (633 jobs; 1.7%). Utilities added 83 jobs (1.6%). Mining contracted (175; -13.1%). From 2011-2016, the group represented 14.1% of new jobs compared to 27.8% for California (Exhibit 8).

CLEAN WORK, MODERATE PAY: 6,592 JOBS; 4.0%

From 2015-2016, the Inland Empire's sectors paying moderate incomes (\$45,000-\$60,000) to office-based workers are estimated to have gained 6,592 workers (4.0%) and 17.0% share of new jobs (green). K-12 education added 6,592 jobs (5.3%) with a stronger state budget. Finance, insurance and real estate groups increased by just 200 jobs (0.5%). From 2011-2016, the group represented 7.1% of new jobs compared to 5.8% for California.

DIRTY WORK, MODERATE PAY: 16,275 JOBS; 4.9%

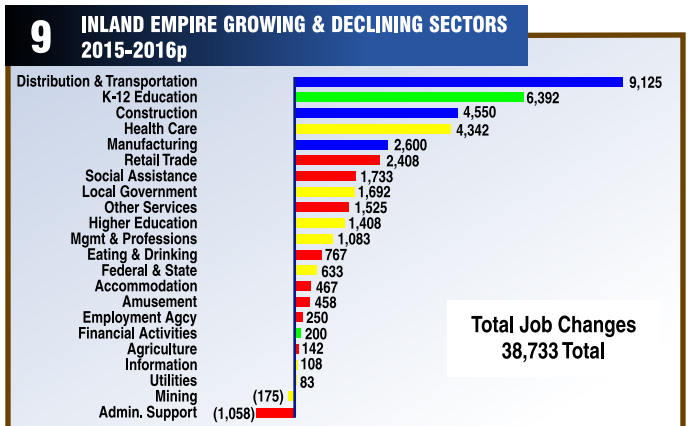
Blue collar and technical jobs in the Inland Empire (\$45,000-\$60,000) grew by 16,275 jobs (4.9%) during 2016. Distribution and transportation added 9,125 workers (5.9%) and 42.0% share of new jobs (blue). Construction added 4,550 jobs (5.3%) as infrastructure and industrial projects continued and home building saw a little life. Manufacturing gained 2,600 jobs (2.7%) despite the difficulty of doing business in California. From 2011-2016, the group represented 40.2% of new jobs compared to 19.7% for California.

LOWER PAYING JOBS: 6,692 JOBS; 1.2%

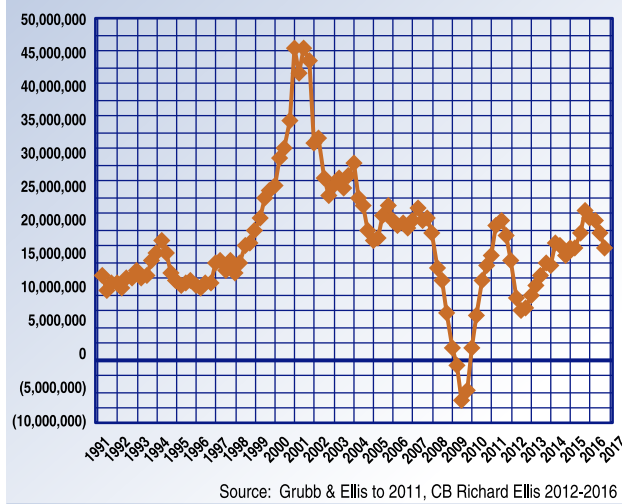
The Inland Empire's lower paying sectors (\$30,000 or less) added 6,692 jobs (1.2%) in 2016 and an uncharacteristically low 17.3% share of overall job growth (red). The fastest growth was in consumer services (1,525; 3.5%), social assistance (1,733; 2.9%), accommodation (467 jobs; 2.9%) and amusement (458 jobs; 2.5%). Retail trade (2,408; 1.4%) added the most jobs while the related eating & drinking group stopped its rapid expansion (767; 0.7%). Very slow growth also occurred in agriculture (142; 0.9%) and employment agencies (250; 0.5%). Firms providing services to offices shrank (-1,058; -2.1%). From 2011-2016, the group represented 38.6% of new jobs compared to 46.7% for California.

COMMENT

Last year, the QER forecasted that 2016 would see 48,700 more jobs, up 3.5%. The mid-year estimates by BLS (44,706; 3.33%) and EDD (43,900; 3.28%) neared this level. However, EDD's estimate that growth slowed to 2.41% in the last half of the year left the annual forecast at (38,733 new jobs; 2.84%). That slowdown seems inappropriately steep, particularly the end result of just a 17.3% of all new jobs. Revisions should put 2016 closer to 45,000 new jobs. ■

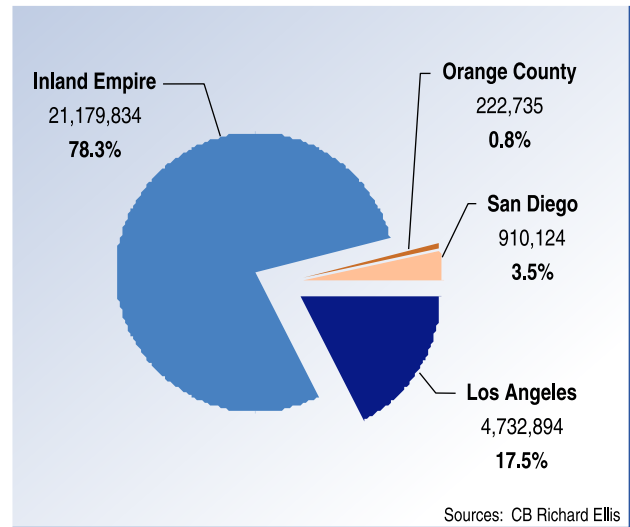


10 INDUSTRIAL SPACE NET ABSORPTION Inland Empire, 1991-Present (moving 4-quarter total)



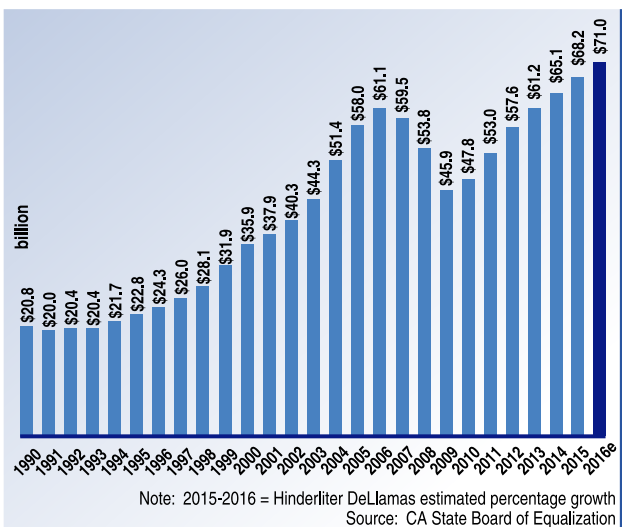
Industrial Space Net Absorption. For the four quarters ended in December 2016, industrial firms took a net of 17.1 million square feet of Inland Empire space. That was down from a peak of 23.1 million for 2016 but still quite strong. Absorption is coming partly due to the continued growth of imported cargo at the ports of L.A. and Long Beach which tied for its second strongest year at 8.0 million 20-foot equivalent containers. Importantly, the surge in large new fulfillment centers in the inland area has continued. They are needed to process and ship goods to families throughout Southern California in the rapidly expanded e-commerce market. Absorption brought the vacancy rate down to a very low 4.0%.

11 INDUSTRIAL SPACE UNDER CONSTRUCTION Southern California Market, December 2016



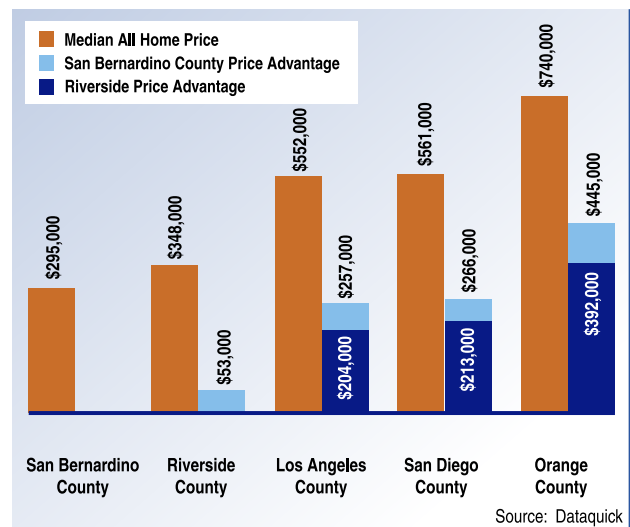
Industrial Construction. One reason that the Inland Empire's construction employment has strengthened has been the strong demand to build new industrial facilities for international trade and e-commerce operations. In December 2016, 21.2 million square feet were under construction or 78.3% of the space being built in Southern California. That was 4.5 times the amount in second placed Los Angeles County. Completed facilities in L.A. County totaled 935.3 million square feet while it was 485.5 million in the Inland Empire (not shown). The local inventory is now 51.7% of the 939.2 million in Los Angeles County.

12 TAXABLE RETAIL SALES Inland Empire, 1990-2016e (billion)



Taxable Sales. A major issue facing the Inland Empire's local governments and transportation agencies was the deep decline in taxable retail sales during the Great Recession. Volume peaked at \$61.1 billion in 2006, but fell -24.9% to \$45.9 billion by 2009. Volume has since steadily increased reaching \$71.0 billion in 2016. That was a record, 16.2% above 2006. However, Southern California prices rose 17.2% in this period. The purchasing power of the sales taxes collected in 2016 have not quite matched the 2006 record. The increase was 17.6% in San Bernardino County which outpaced inflation. It was 4.7% in Riverside County.

13 HOME PRICES, SOUTHERN CALIFORNIA MARKETS Median Priced New & Existing Home, 4th Quarter 2016



Home Price Advantage. In fourth quarter 2016, the median priced of new and used San Bernardino County homes was \$295,000. That was \$257,000 less than the \$552,000 in Los Angeles County, \$266,000 below the \$561,000 in San Diego County and \$445,000 below Orange County's \$740,000. Homes sold for \$348,000 in Riverside County. That was \$204,000 below Los Angeles, \$213,000 under San Diego and \$392,000 below San Diego. These enormous price differentials have historically caused numerous families to migrate inland. To date, this has not happened likely due to the pervasive fears developed by consumers during the Great Recession's housing collapse. With mortgage defaults lower than before 2000 and Millennials now entering family formation ages, normal demand should begin re-emerging.

14 HOME PRICES 4th Quarter, 2015-2016

County	4 th Qtr-15	4 th Qtr-16	% Chg.
NEW HOMES			
Riverside	\$388,500	\$420,000	8.1%
San Bernardino	445,500	426,000	-4.4%
Los Angeles	568,500	578,000	1.7%
Orange	865,000	867,500	0.3%
San Diego	670,000	690,000	3.0%
Ventura	509,750	570,000	11.8%
So. California	\$577,300	\$607,900	5.3%
EXISTING HOMES			
Riverside	\$310,000	\$334,000	7.7%
San Bernardino	255,000	280,000	9.8%
Los Angeles	510,000	550,000	7.8%
Orange	669,000	705,000	5.4%
San Diego	507,500	545,000	7.4%
Ventura	550,000	577,750	5.0%
So. California	\$459,000	\$489,700	6.7%

Source: Dataquick

15 HOME DEED RECORDINGS Inland Empire, 4th Quarter, 2015-2016

NEW HOMES				EXISTING HOMES			
Area	4 th -2015	4 th -2016	% Chg.	Area	4 th -2015	4 th -2016	% Chg.
Fontana, Rialto, Colton, GT	111	192	73.0%	SB Desert	433	519	19.9%
SB Desert	8	11	37.5%	Fontana, Rialto, Colton, GT	834	987	18.3%
Chino, CHill, Mtcl, Ont, RC, Upl	306	330	7.8%	Victor Valley	1,097	1,231	12.2%
Victor Valley	86	86	0.0%	Redlands, Loma Linda, Yucaipa	427	457	7.0%
SB Mountains	9	9	0.0%	San Bernardino, Highland	686	723	5.4%
San Bernardino, Highland	96	85	-11.5%	Chino, CHill, Mtcl, Ont, RC, Upl	1,244	1,290	3.7%
Redlands, Loma Linda, Yucaipa	50	23	-54.0%	SB Mountains	803	803	0.0%
SAN BDNO COUNTY	666	736	10.5%	SAN BDNO COUNTY	5,524	6,010	8.8%
Corona, Norco, Eastvale	201	302	50.2%	Moreno Valley	500	614	22.8%
Coachella Valley	111	159	43.2%	Beaumont, Banning, Calimesa	367	420	14.4%
Moreno Valley	35	41	17.1%	Murrieta, Temecula, L. Elsinore, Wildomar	1,408	1,596	13.4%
Riverside, Jurupa Valley	137	139	1.5%	Riverside, Jurupa Valley	923	1,019	10.4%
Perris, Hemet, S. Jacinto, Menifee	340	306	-10.0%	Coachella Valley	1,061	1,139	7.4%
Murrieta, Temecula, L. Elsinore, Wildomar	376	337	-10.4%	Perris, Hemet, S. Jacinto, Menifee	1,623	1,728	6.5%
Beaumont, Banning, Calimesa	165	134	-18.8%	Corona, Norco, Eastvale	758	780	2.9%
Riverside Rural	101	71	-29.7%	Riverside Rural	531	519	-2.3%
RIVERSIDE COUNTY	1,466	1,489	1.6%	RIVERSIDE COUNTY	7,171	7,815	9.0%
INLAND EMPIRE	2,132	2,225	4.4%	INLAND EMPIRE	12,695	13,825	8.9%

Source: Dataquick

INLAND EMPIRE: Housing Volumes Some Growth, Home Prices Soaring

In second quarter 2006, the Inland Empire's median new home price peaked at \$437,200, with existing homes reaching \$389,924 in first quarter 2007. Prices then plunged with new homes reaching a low of \$268,155 in third quarter 2010 (-38.7%) and existing home hitting \$155,319 in second quarter 2009 (-60.2%). Both prices have since gained significant ground to \$421,988 for new homes and \$309,526 for existing homes in fourth quarter 2016. The new home price is just -3.5% below the peak. The existing home price is now -20.6% below the peak. The wide gap between these new and existing prices reveals one dilemma facing developers. Their costs have driven up their prices leaving them \$112,462 above existing homes or an average 36.3% more costly (Exhibit 16).

Volume. While home prices have recently increased significantly, volume has been essentially stuck in a 15,000-16,000 range for the past seven years reaching 16,364 seasonally adjusted sales in fourth quarter 2016 up 8% from 14,934 in 2015 (not shown). Some added growth should returning to the market in 2017. This is the case since notices of default for inland homes are the lowest since before 2000, while San Bernardino County's combined median home price (\$295,000) is \$257,000 to \$445,000 below prices in the coastal counties and Riverside County's combined median (\$348,000) is \$204,000 to \$392,000 lower (see Exhibit 13).

Looking at raw volume data, Riverside County had 7,815 existing home sales in fourth quarter 2016, up 9.0% from 7,171 in 2015 (Exhibit 15). San Bernardino County had 6,010 existing home sales, up 8.8% from 5,524 in fourth quarter 2015. By sub-market, Riverside's Moreno Valley had the largest percentage gain (614; 22.4%) with Southwest County the volume leader (1,569; 13.4%). In San Bernardino County, the outlying desert areas led in percentage gain (19.9%; 519) while the area west of the I-15 led in volume (1,290; 3.7%).

New home sales are showing some life. Riverside County's fourth quarter 2016 volume was 1,489, up 1.6% from 1,466 in 2015 with the largest percentage gain in Corona, Norco, Eastvale (302, 50.2%). The volume leader was Southwest County (337; -10.4%). San Bernardino County's volume was 736, up 10.5% from fourth quarter 2015's volume of 666. The mid-I-10 area had the highest percentage gain (192, 73.0%). The area west of the I-15 freeway led in volume (330; 7.8%).

Prices. Riverside County's \$420,000 new home price in fourth quarter 2016 was up 8.1% from the prior year's \$388,500 (Exhibit 14). Its \$334,000 existing home price was up 7.7% from \$310,000 in fourth quarter 2015. San Bernardino County's new home price of \$426,000 was off -4.4% from its fourth quarter 2015 price of \$445,500. Its fourth quarter 2016 existing home price of \$280,000 was up 9.8% from fourth quarter last year (\$255,000). In Southern California, the fourth quarter 2016 new home median price was up 5.3% from \$577,300 in 2015 to \$607,900; the existing home median increased 6.7% from \$459,000 to \$489,700.

Looking Ahead. As was the case in 2015, the enormous difference in price between new and existing homes in the inland counties versus that in the coastal counties has not yet caused buyers to begin migrating inland in 2016. In addition, the fact that inland affordability is 46% versus 23% to 26% in the coastal counties has not yet overcome buyer fears of large purchases, long commutes or the lack of Millennial housing formation and demand. The unknown is the extent to which that will change in 2016 as the Inland Empire and coastal economies continue overcoming the psychological effects created by the Great Recession. ■

16 PRICE TRENDS, NEW & EXISTING HOMES Inland Empire, 1988-2016, Quarterly

