2019 inland empire
ECONOMIC FORECAST

The House That Wasn't Built

Housing Scarcity:

The Inland Empire's 'Natural' Barrier To Economic Growth

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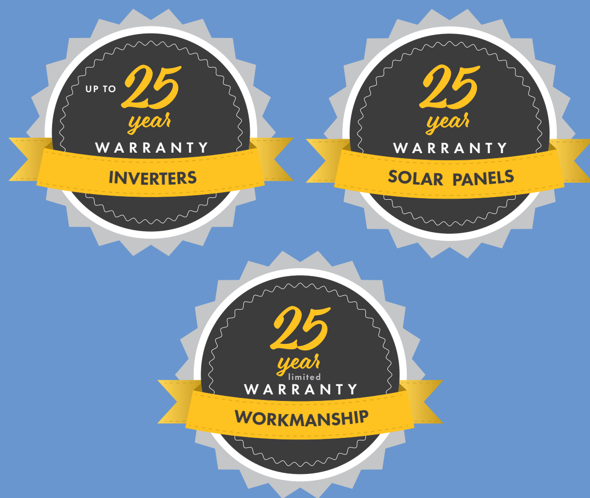

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Agenda

November 6, 2019

The House That Wasn't Built
Housing Scarcity: The Inland Empire's Natural Barrier to Economic Growth

7:30 a.m. Registration Opens

8:30 a.m. **Edward Ornelas**, Publisher (Event Emcee)
Inland Empire Business Journal
Welcome

National Anthem
Performed by Gisele Njoh Njoh
University of California, Riverside
Class of 2021

Beverly Bailey, Chief Executive Officer
Stronghold Engineering
Opening Remarks

Dr. Yunzeng Wang, Dean
School of Business, UC Riverside
Opening Remarks

8:45 a.m. **Dr. Christopher Thornberg**, Director
Center for Economic Forecasting and Development
School of Business, UC Riverside
U.S. & California Forecast

9:30 a.m. **The Case of the Missing Homes: A Conversation Moderated by Christopher Thornberg**

Dr. Paavo Monkkonen, Associate Professor of Urban Planning and Public Policy
University of California, Los Angeles

Steve PonTell, Chief Executive Officer and President
National CORE

10:30 a.m. **Dr. Robert Kleinhenz,**
Director of Economic Research
Center for Economic Forecasting and Development
School of Business, UC Riverside
Inland Empire Regional Forecast

11:10 a.m. **Audience Q & A**

11:25 a.m. **Adjourn and Closing Remarks**

Speakers & Panelists

Edward Ornelas, Jr.,Publisher (Event Emcee)

Inland Empire Business Journal

Edward Ornelas, Jr. is a Los Angeles native, however he likes to tell people that the Inland Empire 'adopted him' in 2012. He is the President and CEO of the Inland Empire Regional Chamber of Commerce and Publisher of the Inland Empire Business Journal. Having worked with many small businesses to enhance their brand, Edward has the experience, passion and drive to succeed in any environment. A "think outside the box" attitude and unorthodox approach has set him apart as a marketer and leader.

Formerly, as an outside sales representative for a large manufacturing company in the Los Angeles market, Edward traveled to just about every state in the U.S. meeting with key clientele, prospects, and attending trade shows.

Since moving from Los Angeles to Fontana in 2011, Edward has become deeply involved in the local community and business community, regularly attending City Council meetings, County meetings, and other key regional gatherings and events that allow him to stay connected to what's happening across the Inland Empire.

Edward has a gift for creating, envisioning, and executing marketing strategies for businesses and nonprofit organizations. Working with clients across the private and public sector, he is recognized as a person who 'gets things done' and his marketing services and expertise come highly recommended.

Beverly Bailey, Chief Executive Officer

Stronghold Engineering, Inc.

Beverly Bailey is the president and CEO of Stronghold Engineering, Inc., a Riverside-based general contracting firm with more than 200 employees in the design-build, electrical, general and civil construction industry. She founded the company in 1991 with her husband, Scott A. Bailey, out of their home. From 1995 to 2004, the firm grew to 185 employees, moved into a 25,000 square foot Riverside corporate headquarters and added branch offices in California, Arizona, Hawaii and internationally. The company is now ranked one of the top 10 minority/women-owned construction companies in the nation.

Ms. Bailey is also the CEO of Lamb Energy, a solar power construction company she founded in 2009. In 2015, she became a Governance Fellow with The National Association of Corporate Directors (NACD). This is the highest level of credentialing for corporate directors and corporate governance professionals.

Ms. Bailey has served on the UCR Foundation Board of Trustees since July 2019. She served as an Executive Fellow for UCR's School of Business during the 2017-2018 academic year. Her current committee memberships include serving as Chair of the School of Business Dean's Advisory Council and serving on the UCRF Board of Trustees.

Ms. Bailey is a managing member of Bailey California Properties, LLC, which purchased The Farm House Motel off University Avenue in Riverside in August 2018. The motel is slated for renovation as an indoor/outdoor center for retail shops, restaurants and entertainment.

Yunzeng Wang, Dean
School of Business, UC Riverside

Yunzeng Wang was appointed permanent Dean of the UC Riverside School of Business in January 2014, after serving as Interim Dean since October 2011. He joined the faculty in July 2008 as the Deans' Distinguished Scholar in Supply Chain Management and Professor of Finance and Management Science, and has served as Associate Dean of Academic Programs. Previously, Dean Wang served as faculty at Weatherhead School of Management at Case Western Reserve University and the School of Management at the University of Texas at Dallas. Dean Wang has a PhD in operations management from the Wharton School at the University of Pennsylvania and a master's degree in management sciences from the University of Waterloo, Canada.

Christopher Thornberg, Director
Center for Economic Forecasting and Development
School of Business, UC Riverside

Christopher Thornberg is widely considered to be one of the nation's leading economists. An expert in economic forecasting, regional economics, labor markets, economic policy, and real estate analysis, he was one of the earliest and most adamant predictors of the subprime mortgage market crash that began in 2007, and of the global economic recession that followed. In 2015, he was named to California State Treasurer John Chiang's Council of Economic Advisors. He also serves on the advisory board of Wall Street hedge fund, Paulson & Co. Inc. Dr. Thornberg holds a PhD in Business Economics from the Anderson School at UCLA.

Dr. Paavo Monkkonen, , Associate Professor of Urban Planning and Public Policy
University of California, Los Angeles

Paavo Monkkonen is Associate Professor of Urban Planning and Public Policy at the UCLA Luskin School of Public Affairs, where he is also the Director of the Latin American Cities Initiative (ciudades.luskin.ucla.edu). Professor Monkkonen researches, writes and teaches about the ways housing policies and markets shape urban development and social segregation in cities around the world. His scholarship ranges in scale from national housing finance programs to local land use regulations, and includes comparative work on countries in the Americas (Argentina, Brazil, Mexico, and the United States) and Asia (China, Hong Kong, India, Indonesia).

He continues to work as a consultant on national housing and urban policy in Mexico, where he has longstanding research projects, and is active in local housing politics in California. He is on the Southern California Association of Governments (SCAG) Regional Housing Needs Assessment (RHNA) subcommittee. Professor Monkkonen completed a Master of Public Policy at the School of Public Affairs at the University of California, Los Angeles in 2005, and a PhD in City and Regional Planning at the University of California, Berkeley in 2009. He was Assistant Professor of Urban Planning at the University of Hong Kong from 2009 to 2012.

Steve PonTell, CEO
National CORE

Steve PonTell is the Chief Executive Officer and President of National CORE. He has become a passionate advocate for the residents and communities we serve and today is one of the leading voices and public speakers on the topic of housing affordability and community transformation. Mr. PonTell has led several regional and national symposiums on our nation's housing crisis. In addition, he has addressed the California Assembly on the challenges facing the affordable housing industry.

During his career, Mr. PonTell has pursued a variety of entrepreneurial ventures and has held several public-private leadership positions. Active in his community and industry, he serves on several boards of directors, including the California Endowment, National Housing Conference, BizFed Institute and Southern California Leadership Council. He also is an active member of the Urban Land Institute and the American Planning Association. Mr. PonTell graduated from the California Polytechnic State University — San Luis Obispo with a Bachelor of Science in City and Regional Planning and the Claremont Graduate University's Drucker School of Business with an Executive Master of Business Administration.

Dr. Robert Kleinhenz, Director of Economic Research
Center for Economic Forecasting and Development
School of Business, UC Riverside

Robert Kleinhenz is one of California's leading economists, with nearly 30 years of experience analyzing the U.S. and California economies and the economies of California's many diverse regions. He is a much sought-after specialist for his deep knowledge of industries across the state and in the counties of Southern California. Dr. Kleinhenz formerly served as Chief Economist of the Kyser Center for Economic Research at the Los Angeles County Economic Development Corporation and as Deputy Chief Economist at the California Association of Realtors. Dr. Kleinhenz holds a PhD from the University of Southern California.

2019 inland empire ECONOMIC FORECAST

UC RIVERSIDE UNIVERSITY OF CALIFORNIA | School of Business

CENTER FOR ECONOMIC FORECASTING & DEVELOPMENT

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United States Forecast

The Recession That Wasn't

Since the start of this year, the news has been flooded with almost continuous calls that a recession is on the way. The rhetoric has shifted from suggesting that the United States 'might' have a recession in the near future to a tone of almost complete certainty about an oncoming downturn and what it will mean for the election, for millennials, for whatever. The reasons for these predictions vary—from the length of the current expansion, to the trade war with China, to the ironic suggestion that the sheer bulk of conversation about a coming recession will, by itself, create the next recession.

Beacon Economics continues to ignore these constant cries of wolf (or perhaps 'bear' would be more appropriate). Our views have not changed since the last edition of this outlook and, if anything, we are more bullish on the economy today than we were at the start of the year. To us, the numbers don't suggest that the United States has successfully weathered a series of economic storms, but rather beg the question as to whether there has been a storm to navigate. The economy continues to expand at a safe and steady pace, with few of the stressors or imbalances that could cause a major disruption. The longest expansion in U.S. economic history will continue for the foreseeable future.

When the second quarter U.S. GDP release came out, there was a modest revision of the last two years of output data. The new history is almost boring in its consistency. GDP growth in 2019 has averaged 2.55%, compared to 2.5% average growth in 2018 and 2.8% in 2017. It is difficult to see turbulence here despite all the rhetoric to the contrary.

Consumer spending has been steady, adding slightly less that 2% to growth for the last 5 years. While business investment slowed somewhat in 2019, on the upside, there has been more than enough of a surge in public spending to offset slower spending from business. Residential investment is still a drag on the economy, although less of one than next year. And while exports have fallen a bit, the effect on the economy has been very small and has been offset by modestly declining imports. In other words—yawn. Not much to talk about here.

Moreover, it isn't just the output data that looks positive. While U.S. job growth has slowed modestly this year to about 160,000 jobs per month, with the nation's low unemployment rate and slow growth in the labor force, this is not surprising. The job openings rate in the United States is still significantly higher than the unemployment rate. Additionally, tight labor markets over the last two years have caused wages to rise at a faster pace.

All this seems to stand in stark contrast to the most talked-about stress point in the economy today—the trade war with China. The rhetoric surrounding the economic impact of the current tariffs has reached an almost hysterical level. The stock market leaps or collapses on the basis of a tweet from the President on the subject. Yet we are hard pressed to find a shred of data that suggests these shifting trade flows have had any broad, overall impact on the U.S. economy—and even struggle to find evidence for a narrow, limited impact.

There is little doubt that the tariffs being slapped onto products coming from China have affected trade flows with that nation. In nominal terms, imports from China through the first half of 2019 were down 13% from the same period in 2018. Exports responded even more dramatically—down 19% from the previous year. But trade is fungible. Overall, the nominal value of imports and exports is largely the same as last year at this time. Real trade flows, including services, are also largely unchanged from 2018. One might understandably wonder 'what trade war'?

	2017	2018	2019 H1
GDP	2.80	2.50	2.55
Final Demand	3.02	2.65	2.74
Consumption	2.00	1.79	1.94
Goods	1.06	0.62	1.05
Services	0.94	1.17	0.89
Investment	0.86	0.61	0.18
Structures	0.05	0.08	-0.09
Equipment	0.49	0.30	0.02
IPP	0.17	0.40	0.33
Residential	0.16	-0.18	-0.08
Net exports	-0.16	-0.43	0.01
Exports	0.66	0.05	-0.11
Imports	-0.82	-0.49	0.11
Government	0.15	0.27	0.64
Federal	0.11	0.17	0.33
State and local	0.04	0.09	0.31

CONTRIBUTIONS TO U.S. GDP GROWTH
QUARTERLY AVERAGES
Source: U.S. Bureau of Economic Analysis, Analysis By UCR Center for Forecasting

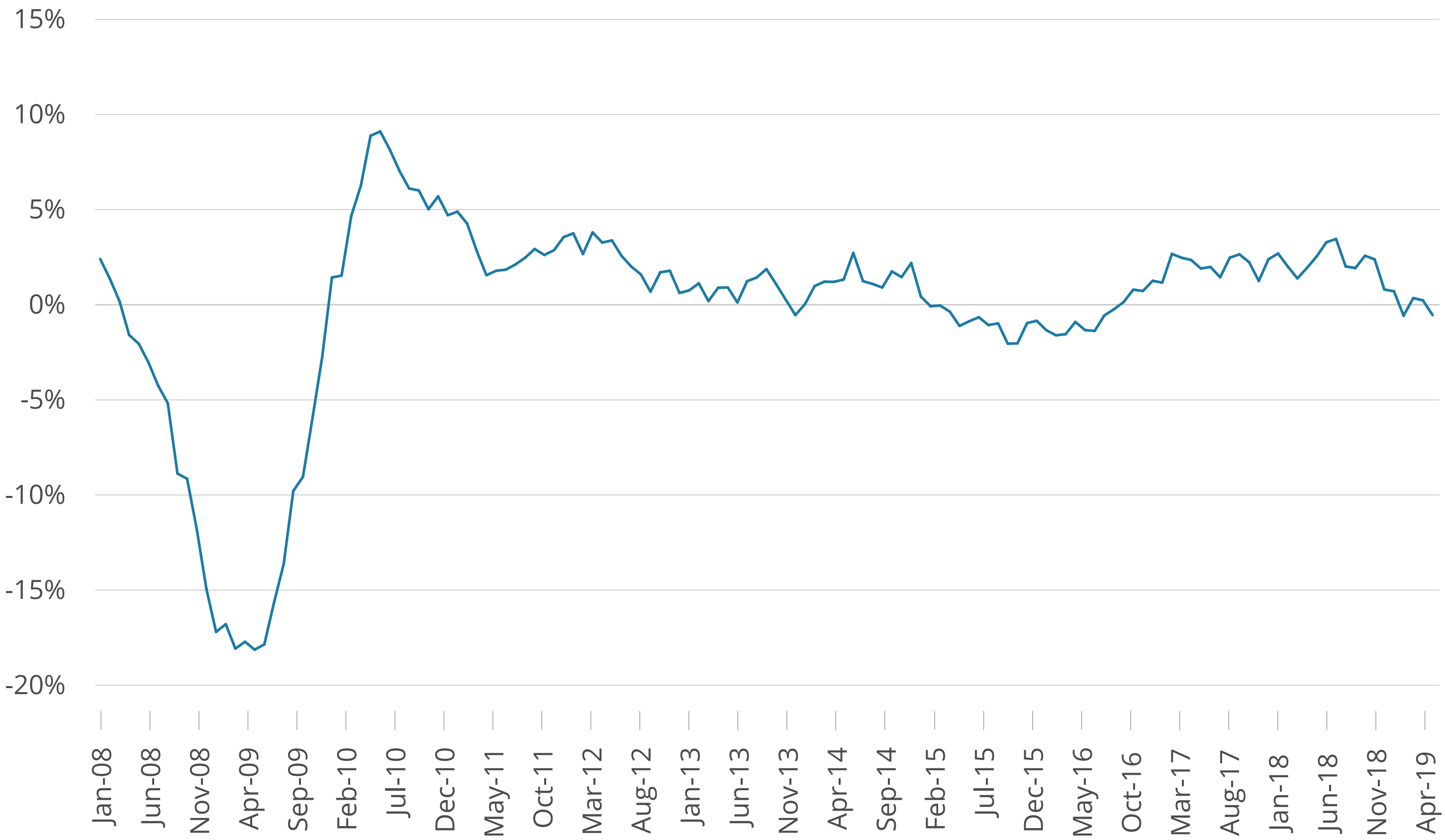
Exports	June. 2019 YTD	YOY % Growth	Imports	June. 2019 YTD	YOY % Growth
Total	$823.6	-1.0%	Total	$1,235.8	0.3%
Canada	$148.1	-3.1%	China	$219.0	-12.4%
Mexico	$129.3	-1.7%	Mexico	$179.6	6.3%
China	$52.0	-18.9%	Canada	$158.1	-1.1%
Japan	$36.8	2.6%	Japan	$72.9	3.9%
UK	$34.1	0.2%	Germany	$62.3	-0.1%
Germany	$30.4	3.2%	Korea	$39.2	10.7%
Korea	$28.3	4.4%	UK	$31.0	5.7%
Netherland	$26.1	10.2%	Vietnam	$30.4	33.4%
Brazil	$20.8	9.3%	Ireland	$29.9	6.2%
France	$19.4	5.5%	France	$29.7	15.5%

U.S. TRADE - EXPORT AND IMPORT GROWTH
(IN $BILLIONS)
Source: WISERTrade, Analysis By UCR Center for Forecasting

Additionally, inflation has not heated up as a result of tariffs on imports—it has actually slowed to a modest 1.5%. Even for products that are imported directly, we see little difference in price growth as a result of the tariffs. Inflation rates over the last year were 1% for apparel, 2.4% for furniture, 2.2% for tires, and AV equipment was actually down by a whopping 9.8%. Dishes and flatware did rise by 8%, but it seems unlikely that the higher cost of new tableware will push the U.S. consumer to the breaking point. Much of this is being driven by the fact that the Chinese have allowed their currency to depreciate sharply, to over 7 yuan per dollar, meaning they have picked up most of the cost of the tariffs. In short, the only true macroeconomic effect of the trade war has been in the news/media business.

	2019 H1
Furniture and bedding	2.40
Appliances	0.10
Dishes and flatware	8.00
Tools, hardware	2.30
Apparel	1.00
Tires	2.20
Video and audio products	-9.80
Sporting goods	0.00

CPI INFLATION RATE
AUGUST 2018 TO AUGUST 2019
Source: U.S. Bureau of Labor Statistics, Analysis By UCR Center for Forecasting

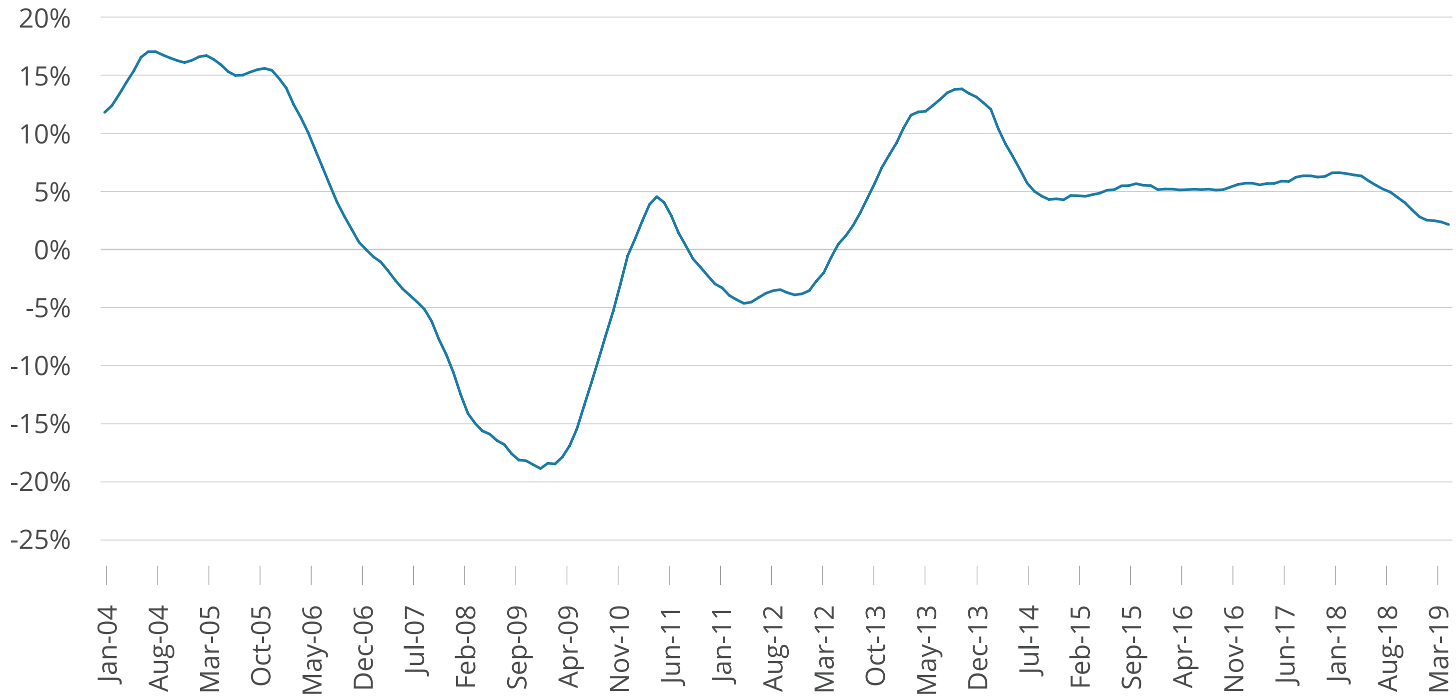


INDUSTRIAL PRODUCTION: MANUFACTURING
(YEAR-OVER-YEAR)
Source: Board of Governors of the Federal Reserve System, Analysis by UCR Center for Forecasting

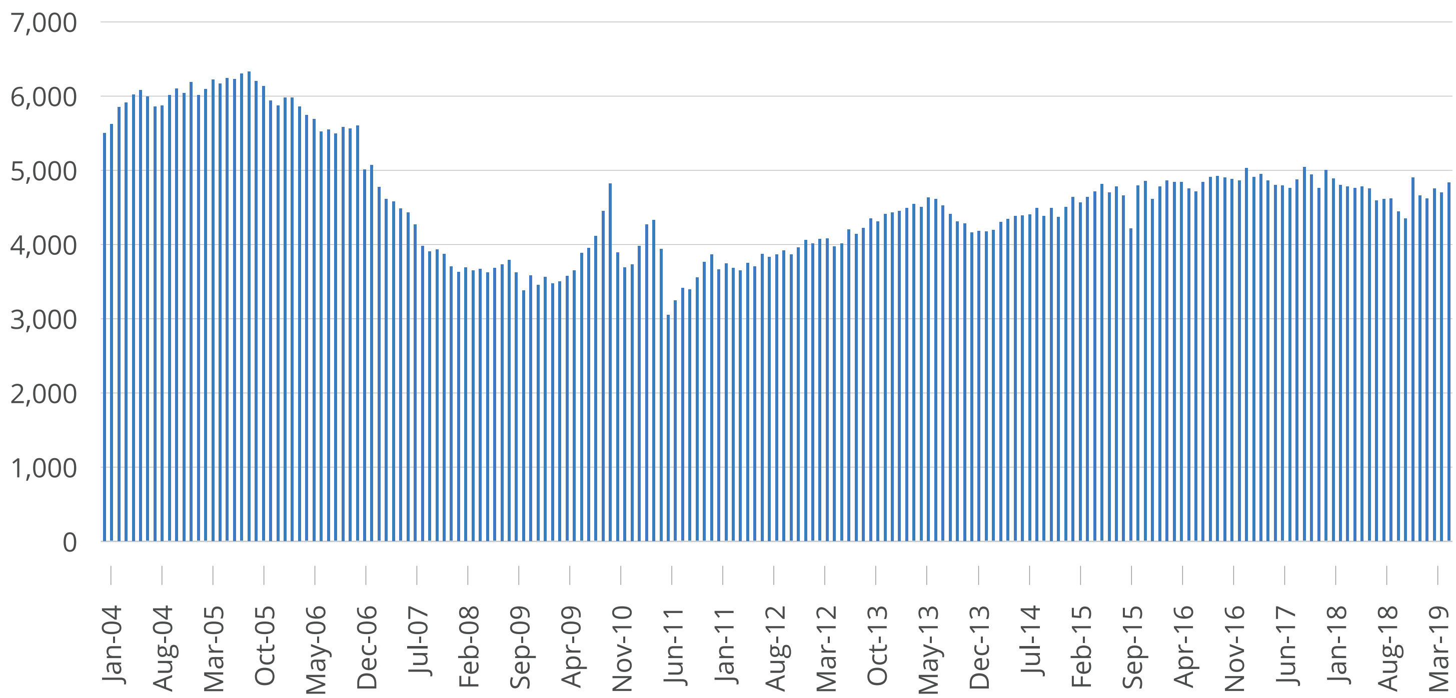
While it's true that manufacturing output has flattened, it isn't much of a stressor on the economy. In 2016, industrial production went negative in the midst of the global commodity bust. Yet this was barely seen in overall growth at the national level. A huge share of the U.S. economy today is in services, making it far more immune to manufacturing cycles.

As for why manufacturing is flat, a portion is indeed being driven by flattening exports, but another, perhaps even more significant portion, stems from weak business investment. The slowdown in business investment is not too surprising given the strong numbers over the last two years, much of which was driven by the accelerated depreciation giveaway in the Tax Cuts and Jobs Act of 2017.

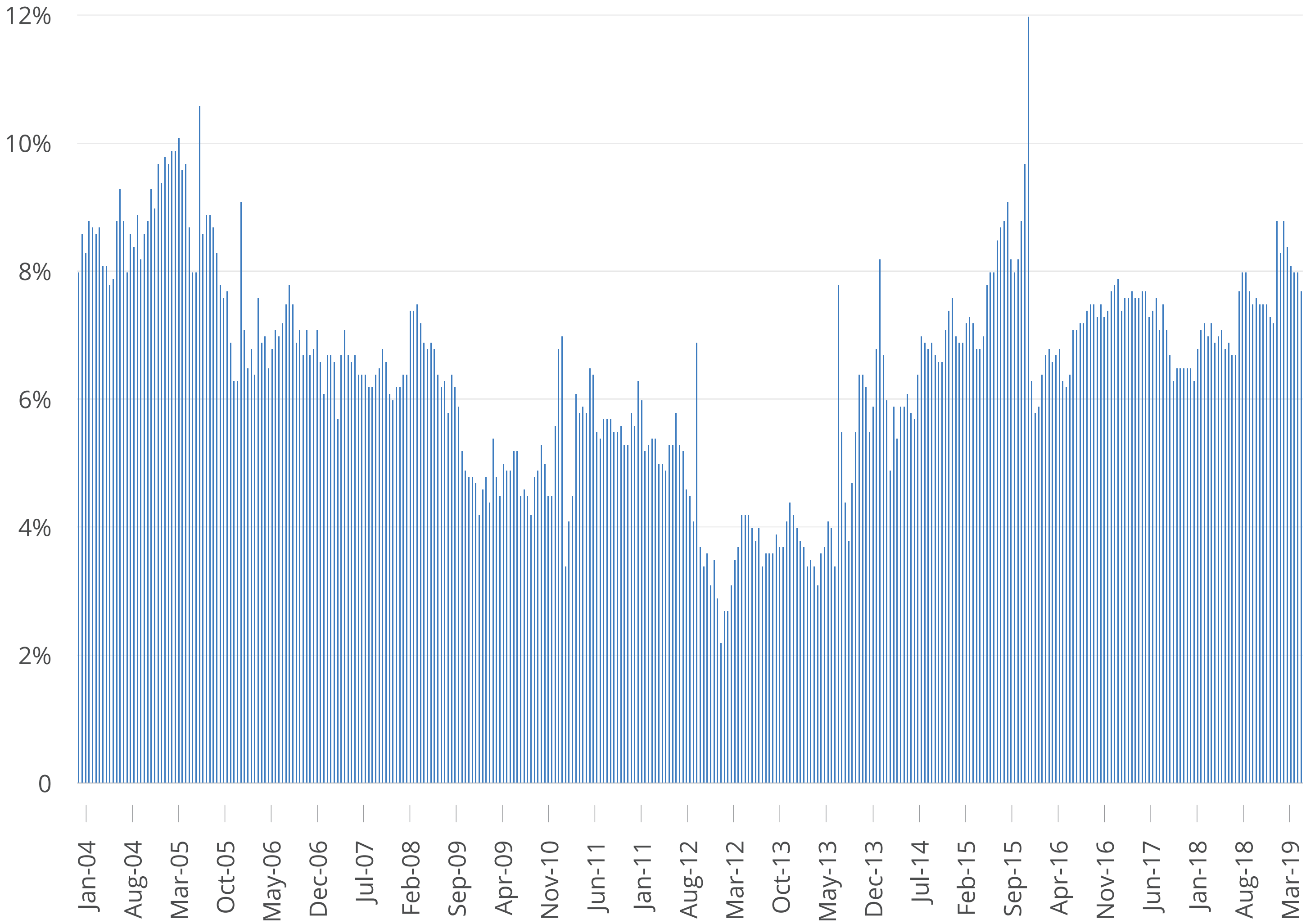
And countering this modest negative is plenty of good news. On the upside, falling interest rates are already starting to create new momentum in residential real estate. Home sales are picking up and new home sales are back to a 12-year high (albeit still much lower than in 2006). Home price growth is also stabilizing. Additionally, expect a wave of refinancing on homes (interest rates are back to 3.5%!) as consumers move



U.S. HOME PRICE GROWTH
(YEAR-OVER-YEAR)
Source: S&P Dow Jones Indices LLC, S&P/Case-Shiller 20-City Composite Home Price Index, Analysis by UCR Center for Forecasting



U.S. SINGLE-FAMILY HOMES SOLD
(IN THOUSANDS)
Source: Board of Governors of the Federal Reserve System, Analysis by UCR Center for Forecasting



PERSONAL SAVINGS AS A PERCENTAGE OF DISPOSABLE PERSONAL INCOME
Source: U.S. Bureau of Economic Analysis, Analysis by UCR Center for Forecasting

to save even more on their interest payments. Beacon Economics expects real estate to become a positive force for growth in the second half of the year and even more so in 2020.

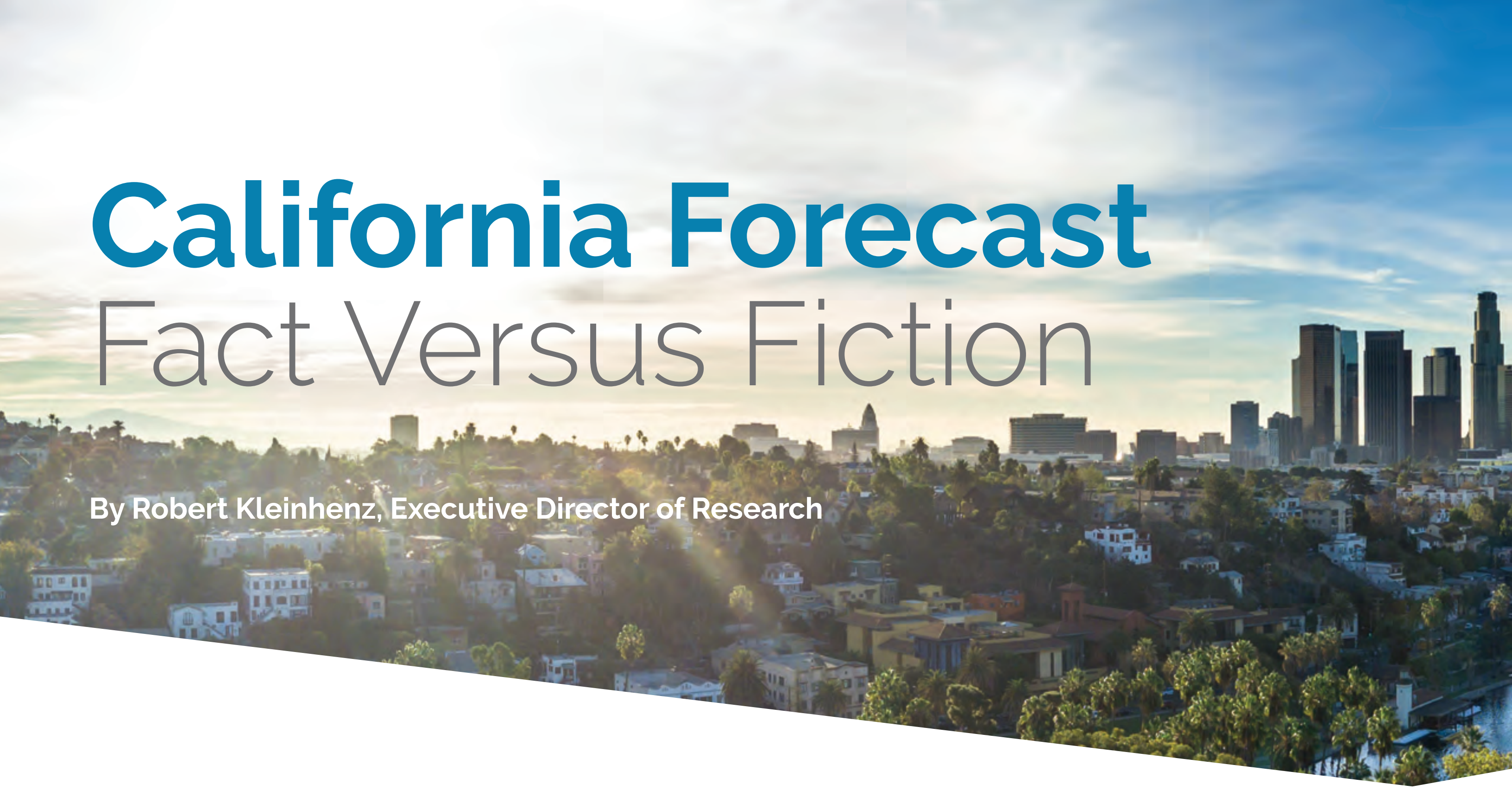
Speaking of consumers, there were a number of pleasant surprises in the revised GDP data, including another upward revision in consumer savings rates. The rate is currently at 8%, the highest since the early 1990s (outside of an odd surge prior to taxes going up in 2012). Americans are actually tucking money away. Combined with low interest rates and a slow pace of household debt growth, the financial obligations ratio continues along at a record low level. The U.S. consumer sector hasn't been this healthy in two decades, and a healthy consumer sector can push the nation through any major issues in the global economy.

One of the big questions is how we square our benign view of the economy with the inverted yield curve, which historically is one of the best

predictors of an oncoming recession. The answer is to understand that correlation is not causation—short run interest rates being higher than long run interest rates has never, by itself, created a recession. Rather, the strong correlation in this data is driven traditionally by the Federal Reserve raising short run interest rates to try and cool an overheating economy. In other words, the inverted yield curve is like the skid marks at the top of a cliff. It is a sign of trying to avoid an accident.

The good news is that the United States is not currently facing a cliff. The U.S. economy is stable and the expansion will continue. Beacon Economics' expects GDP growth to continue at a steady 2.5% pace for the foreseeable future. Unemployment will remain low and wages will continue to rise. Also, expect housing prices to accelerate. As for when exactly the next recession might arrive — we simply don't know.

California Forecast
Fact Versus Fiction



By Robert Kleinhenz, Executive Director of Research

While still savoring the fact that the U.S. economy is the midst of a record-breaking expansion, attention has suddenly shifted to questions about when the next recession will begin. Admittedly, there are a number of mounting concerns: U.S. trade conflicts, weaker global economic conditions, Brexit, and the inverted yield curve. Still, despite the uncertainty that has fueled these concerns, and despite chronic homegrown problems with respect to the labor force and housing, California's economy has performed solidly through the first half of the year, and will stay on track into 2020.

Just the Facts, Ma'am

Looking beyond the rhetoric and headline-catching hyperbole, data clearly show a California economy that is humming along. The state's unemployment rate, having hit a record low of 4.1% in July 2018, has been skating along at that rate, or slightly above, in the months since. Jobs grew statewide at a year-over-year rate of 1.8% in July 2019, comfortably above the long run growth rate (since 1991) of 1.2% and a just a hair behind last year's 1.9% rate of expansion. And with a tight labor market and steady job growth, wages continue to climb.

California added 311,800 jobs year-over-year as of July, and has accounted for 16% of job gains nationally through the first seven months of 2019, essentially unchanged from the previous five years. Health Care, Professional Scientific and Technical Services, Leisure and Hospitality, and Construction led the way in absolute terms,

accounting for roughly two-thirds of the state's total job gains.

Each of these industries is driven by its own dynamic. Health Care has been on a sustained growth path for several years, while the advances in Professional Scientific and Technical Services show the strength of the state's tech sector. Meanwhile, gains in Leisure and Hospitality employment are a reflection of spending from household and business discretionary income.

Construction, Professional Scientific and Technical

Industry	July '19	YTY Change	YTY % Change
Total Nonfarm	17,488,600	311,800	1.8%
Health Care & Social Assistance	2,433,600	74,400	3.2%
Professional, Scientific & Technical Services	1,327,400	46,500	3.6%
Leisure & Hospitality	2,025,700	40,900	2.1%
Construction	900,700	37,100	4.3%
Government	2,612,400	35,100	1.4%
Administrative & Support & Waste Services	1,159,600	30,400	2.7%
Transportation, Warehousing & Utilities	681,800	16,200	2.4%
Information	555,300	15,100	2.8%
Manufacturing	1,337,900	12,800	1.0%
Educational Services	382,700	8,400	2.2%
Real Estate & Rental & Leasing	296,700	3,700	1.3%
Other Services	576,500	2,000	0.3%
Management of Companies & Enterprises	255,700	1,700	0.7%
Mining	22,700	-200	-0.9%
Finance & Insurance	542,600	-600	-0.1%
Wholesale Trade	698,300	-700	-0.1%
Retail Trade	1,679,000	-11,000	-0.7%

JOB GAINS ACROSS NEARLY ALL INDUSTRIES
Source: California Employment Development Department, Analysis by UCR Center for Forecasting

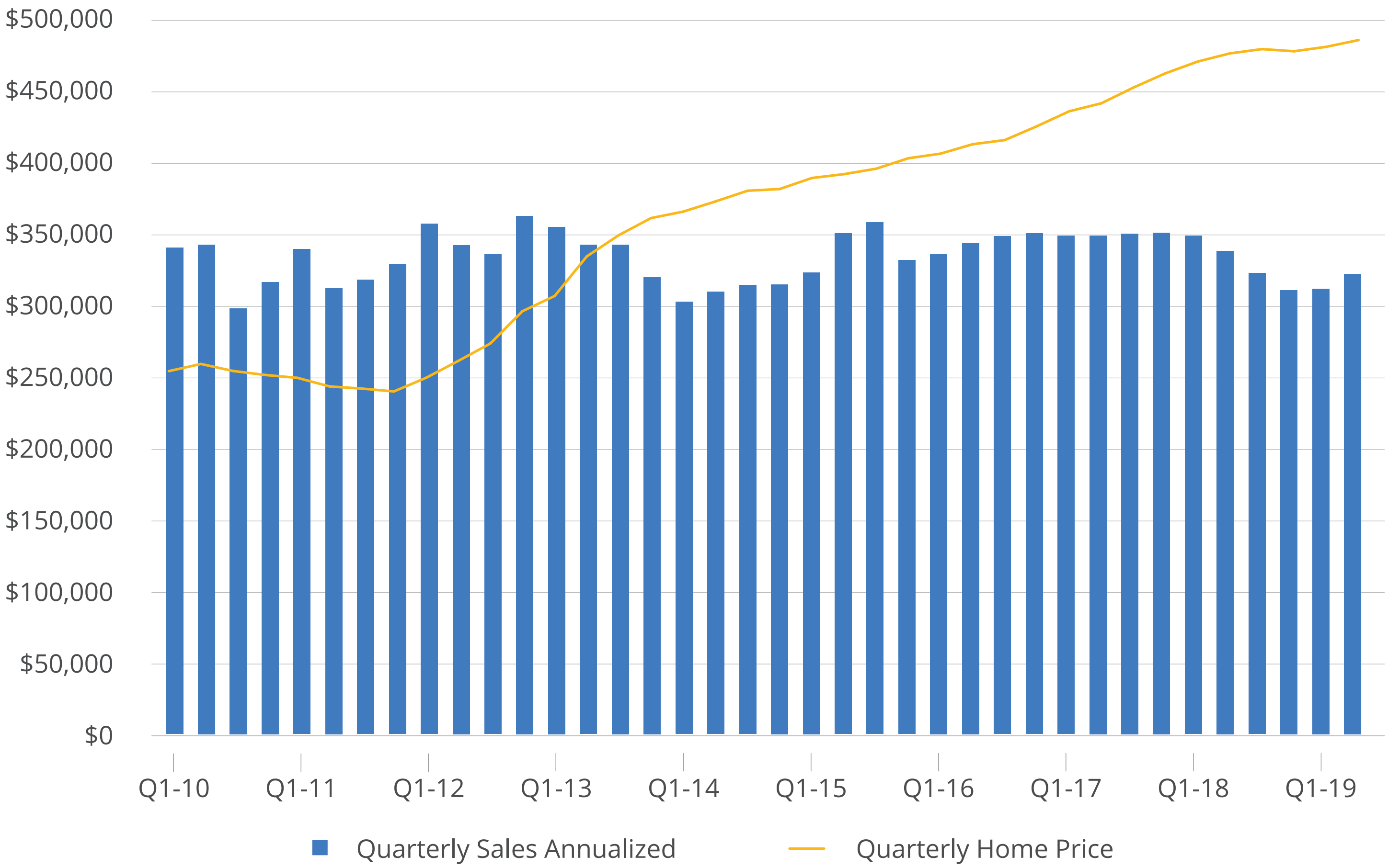
Services, and Health Care were also leaders in percentage terms, followed by Information. On the other hand, five of the state's 17 major industries contracted, losing a total of 13,600 jobs from July 2018 to July 2019 (less than 0.1% of the state's total payroll employment).

Evidence of growth can also be seen early in the year, in real gross state product, which was up 2.7% year-to-year in the first quarter, and in nominal personal income, which advanced by 3.1% over the same period, slightly off the national pace in both cases. When viewed alongside the 8.1% increase in statewide taxable sales over this same period, it appears that both household and business spending have the wherewithal to fuel continued spending.

Regionally, Los Angeles County led the state in job growth in July 2019 with an increase of 59,400 positions, followed by San Francisco MD (41,100), the Inland Empire (35,700), and San Jose (33,500). All but two metro areas in the state

MSA	July '19	YTY Change	YTY % Change
Los Angeles-Long Beach-Glendale Metro Div	4,568,600	59,400	1.3%
San Francisco-Redwood City-South San Francisco Metro Div	1,186,500	41,100	3.6%
Riverside-San Bernardino-Ontario MSA	1,545,400	35,700	2.4%
San Jose-Sunnyvale-Santa Clara MSA	1,161,100	33,500	3.0%
San Diego-Carlsbad MSA	1,514,000	27,600	1.9%
Anaheim-Santa Ana-Irvine Metro Div	1,677,600	25,800	1.6%
Oakland-Hayward-Berkeley Metro Div	1,200,700	20,700	1.8%
Sacramento--Roseville--Arden-Arcade MSA	1,020,900	19,700	2.0%
Fresno MSA	363,700	12,100	3.4%
Bakersfield MSA	273,200	6,800	2.6%
Santa Maria-Santa Barbara MSA	189,700	6,100	3.3%
Salinas MSA	148,100	5,300	3.7%
San Rafael MD	119,900	3,400	2.9%
Visalia-Porterville MSA	128,400	3,200	2.6%
Santa Rosa MSA	212,000	3,100	1.5%
Modesto MSA	180,000	2,700	1.5%
San Luis Obispo-Paso Robles-Arroyo Grande MSA	120,100	2,500	2.1%
Santa Cruz-Watsonville MSA	104,600	2,200	2.1%
Merced MSA	70,100	1,600	2.3%
Napa MSA	75,700	1,400	1.9%
Oxnard-Thousand Oaks-Ventura MSA	310,800	1,100	0.4%
Chico MSA	84,500	1,100	1.3%
Hanford-Corcoran MSA	41,300	1,000	2.5%
Yuba City MSA	45,400	1,000	2.3%
Redding MSA	68,000	1,000	1.5%
Madera MSA	38,700	500	1.3%
El Centro MSA	52,000	300	0.6%
Vallejo-Fairfield MSA	141,900	-200	-0.1%
Stockton-Lodi MSA	240,800	-200	-0.1%

CALIFORNIA REGIONAL GROWTH CONTINUES
Source: California Employment Development Department, Analysis by UCR Center for Forecasting



SLOWER PRICE GAINS, SALES TURNING AROUND
Source: Corelogic/DQ News, Analysis by UCR Center for Forecasting

added jobs in yearly terms in July. While every region in California is on track to experience job growth for the year as a whole, performance varies across the state depending on underlying fundamentals and the leading industries in each region: steady tech growth in the Bay Area; the energy sector in Bakersfield; tourism, retail, and professional services in Orange County; and logistics in the Inland Empire.

To be sure, California is not without problems. Retail Trade lost 11,000 jobs year-over-year in July, wage and job gains are stronger in some parts of the state than in others, and the housing market is struggling in many regions.

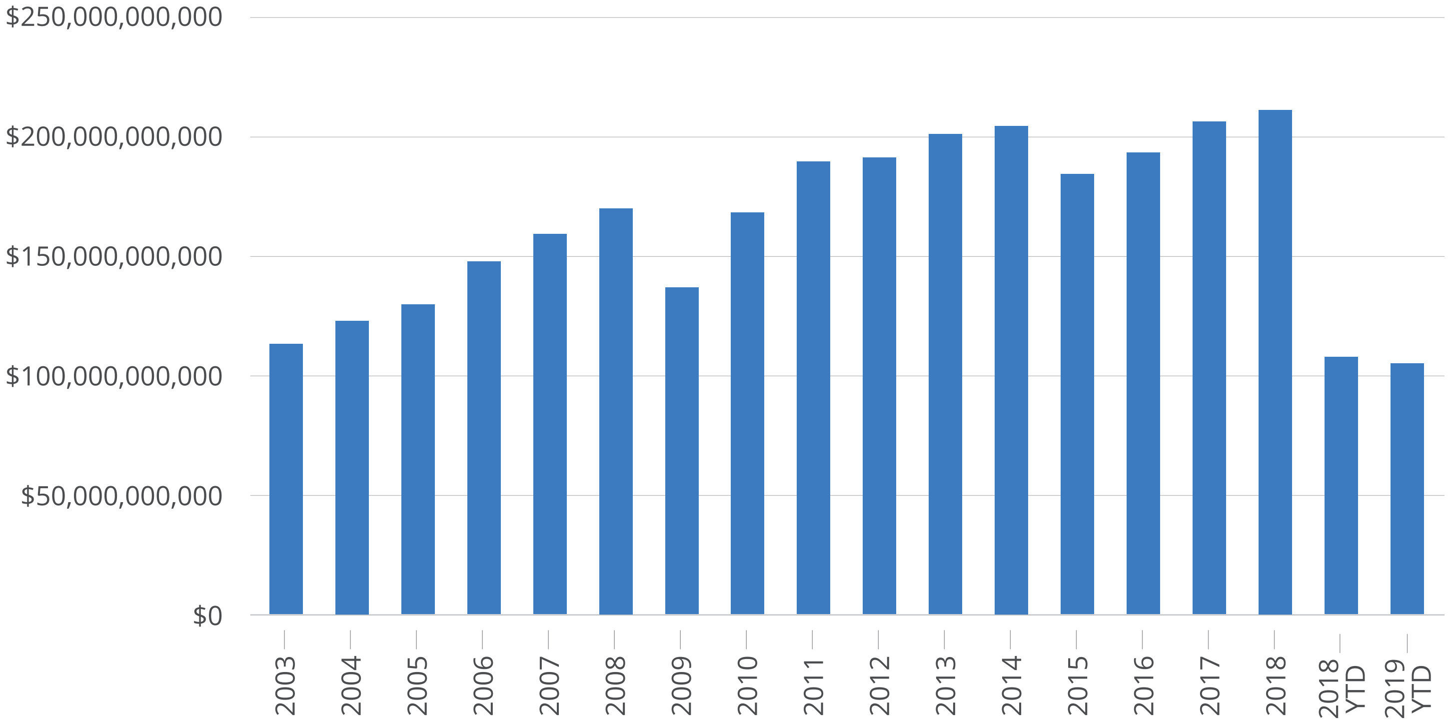
Median home prices are a mixed bag, up across most of the state but flat or decreasing in others. Home sales declined steadily last year in response to rising mortgage rates. However, with rates turning down since late 2018, sales improved modestly in the first half of 2019, and sales in the second half of the year should improve over the first. Meanwhile, rents have continued to rise over the year against a backdrop of stable or declining vacancy rates, and statewide residential construction has declined compared to last year's levels, making an already chronic housing shortfall even worse.

California Continues Growing Despite Trade Wars

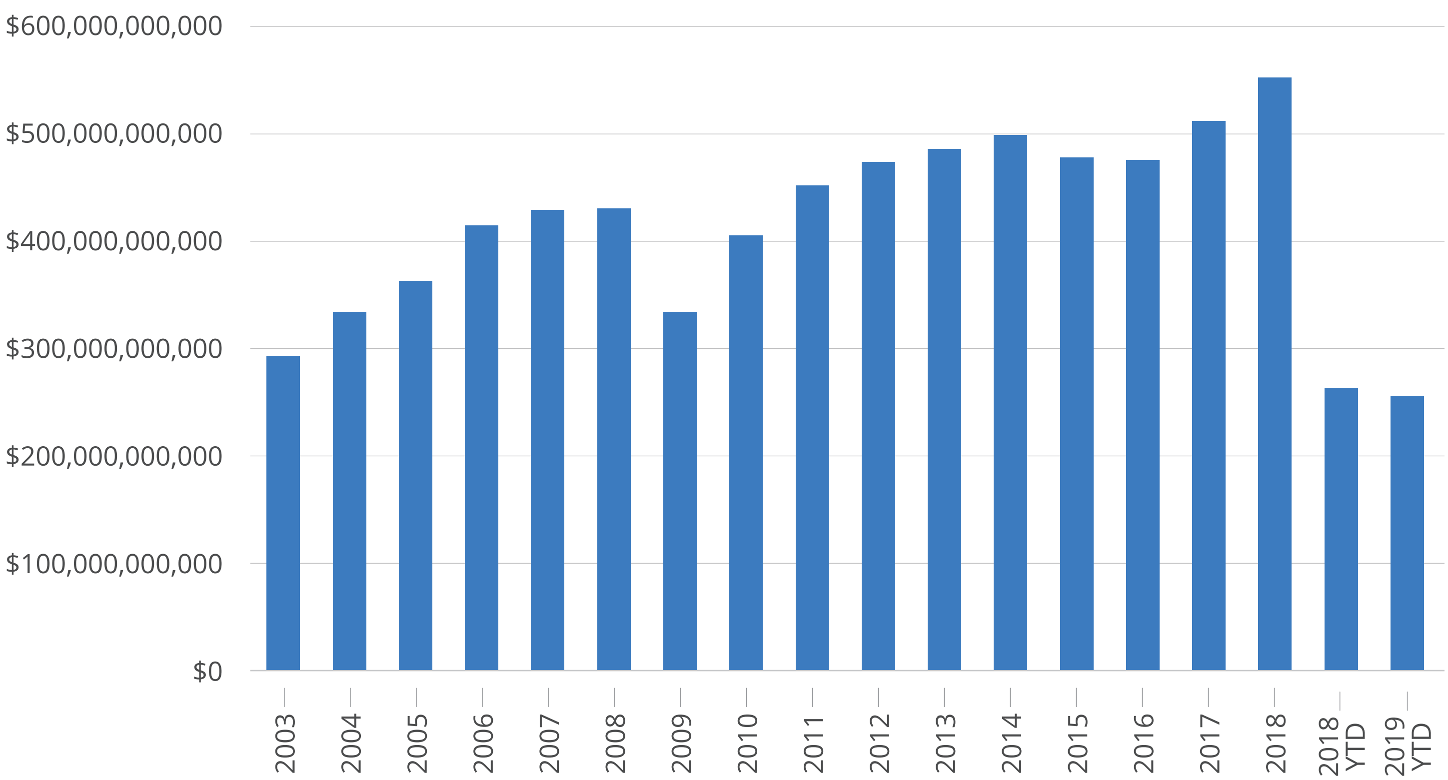
Beginning with the U.S. withdrawal from the Trans-Pacific Partnership upon entering the White House, the Trump Administration has aggressively challenged U.S. trading partners and has sought to reshape U.S. trade policy. As home to the largest port complex in the Western Hemisphere and significant cross-border and trans-Pacific trade activity, California's trade-related and trade-dependent industries have a lot at stake.

Partly because of sustained strength in the economies of the United States and its trading partners, but also because of efforts to stay ahead of forthcoming tariffs and trade restrictions, California exports and imports advanced to new record high levels in 2017 and 2018 despite the Trump Administration's machinations. Of course, some industries and commodities experienced declines over this period in contrast to the overall gains.

Shifting to the first half of this year, both California exports and imports are down in year-to-date terms. However, in light of the fact that the state labor market remains tight, that job gains continue on a sustained basis, and that many of the state's key industries continue to advance, it is clear that the California economy has been bruised, but not broken, by ongoing trade conflicts.



TOTAL EXPORTS, CALIFORNIA ($ BILLION)
Source: WISERTrade, Analysis by UCR Center for Forecasting

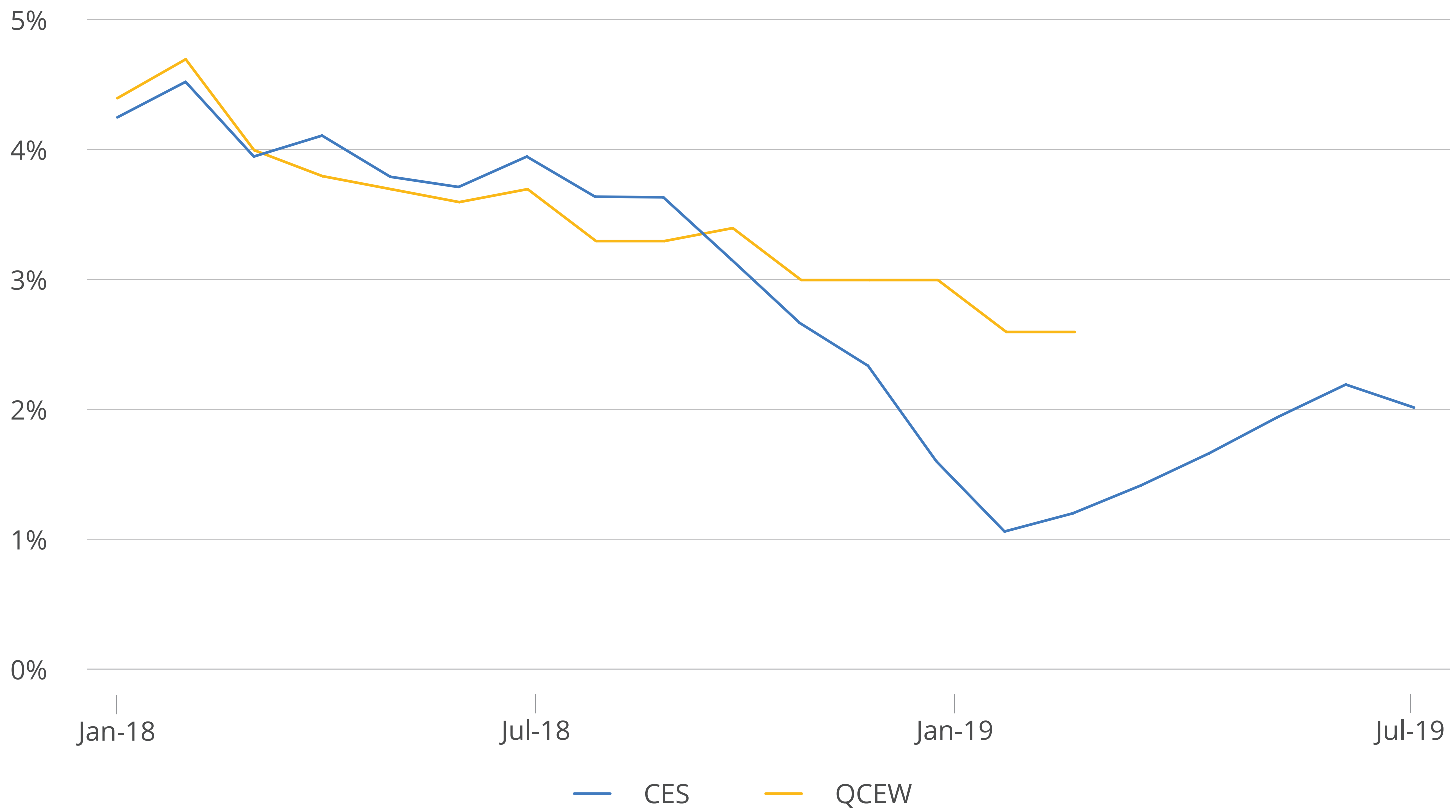


TOTAL IMPORTS, CALIFORNIA ($ BILLION)
Source: WISERTrade, Analysis by UCR Center for Forecasting

Inland Empire Forecast

The Inland Empire's economy continued to grow throughout 2019, although, as forecast by the UCR Center for Forecasting, at a considerably slower pace than last year. However, there are still reasons to be optimistic about the outlook over the next year or more. Of all the industrial and business developments in the Inland Empire, the growing importance of Ontario International Airport showcases the region's vital importance to the Southern California economy. The Inland Empire's logistics sector, a powerhouse for Southern California, continues to be a catalyst for growth. At 4.0% as of August 2019, the region's unemployment rate held steady over the last year, just above the all-time low of 3.9% and just below the statewide rate of 4.1%.

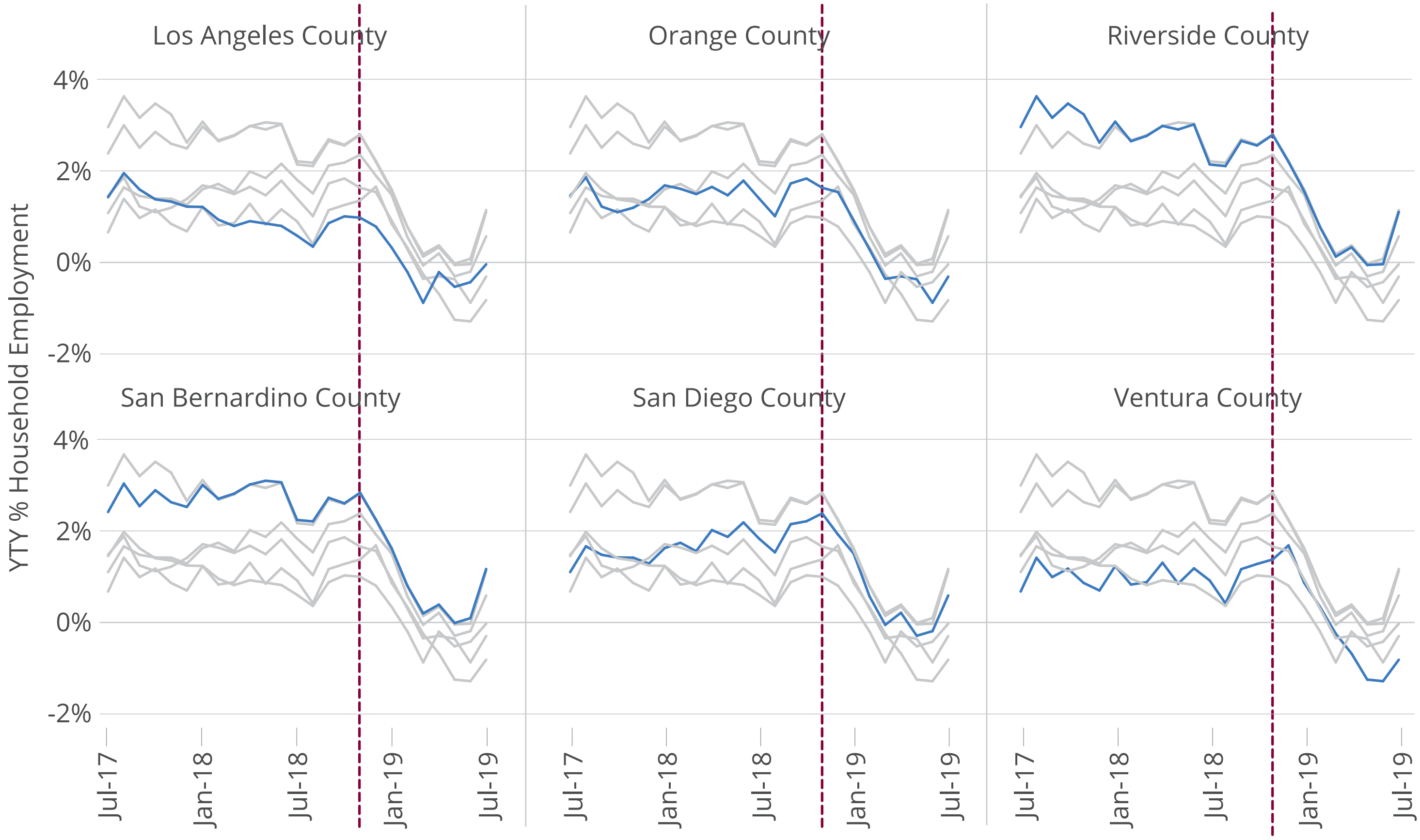
Of course, the region still faces a major challenge with housing. The supply of new housing has been inadequate and, in turn, home prices and rents have both increased substantially. Sales of existing single-family homes declined throughout the first half of 2019, despite the recent decrease in interest rates. Construction has also been weak. The lack of new construction is particularly pronounced in the single-family segment, while



YEAR TO YEAR PRIVATE EMPLOYMENT GROWTH: INLAND EMPIRE
Source: Bureau of Labor Statistics, California Employment Development Department, Analysis by UCR Center for Forecasting

multifamily permits have been strong during the first half of the year, with significant growth in both Riverside and San Bernardino counties. The rental market continues to see increased demand, as evidenced by the large uptick in multifamily permits. However, vacancy rates remain low, especially in areas closer to Los Angeles, meaning supply is still not meeting demand.

While the Center expected slower growth for the Inland Empire and the broader national and state economies, the slowdown in the monthly survey-based estimates is more extreme than anticipated. But there's more to this than meets the eye. One noteworthy concern is the disparity between two measures of employment in the Inland Empire: monthly survey-based employment figures from the Current Employment Statistics (CES) program, operated jointly by the Bureau of Labor Statistics and the California Employment Development Department, and quarterly figures from the Bureau's Quarterly Census of Employment and Wages (QCEW). While the CES series is current through August 2019, the figures are survey-based and therefore subject to measurement problems inherent in all survey data. The QCEW data are more complete, but are reported with a lag, the most recent

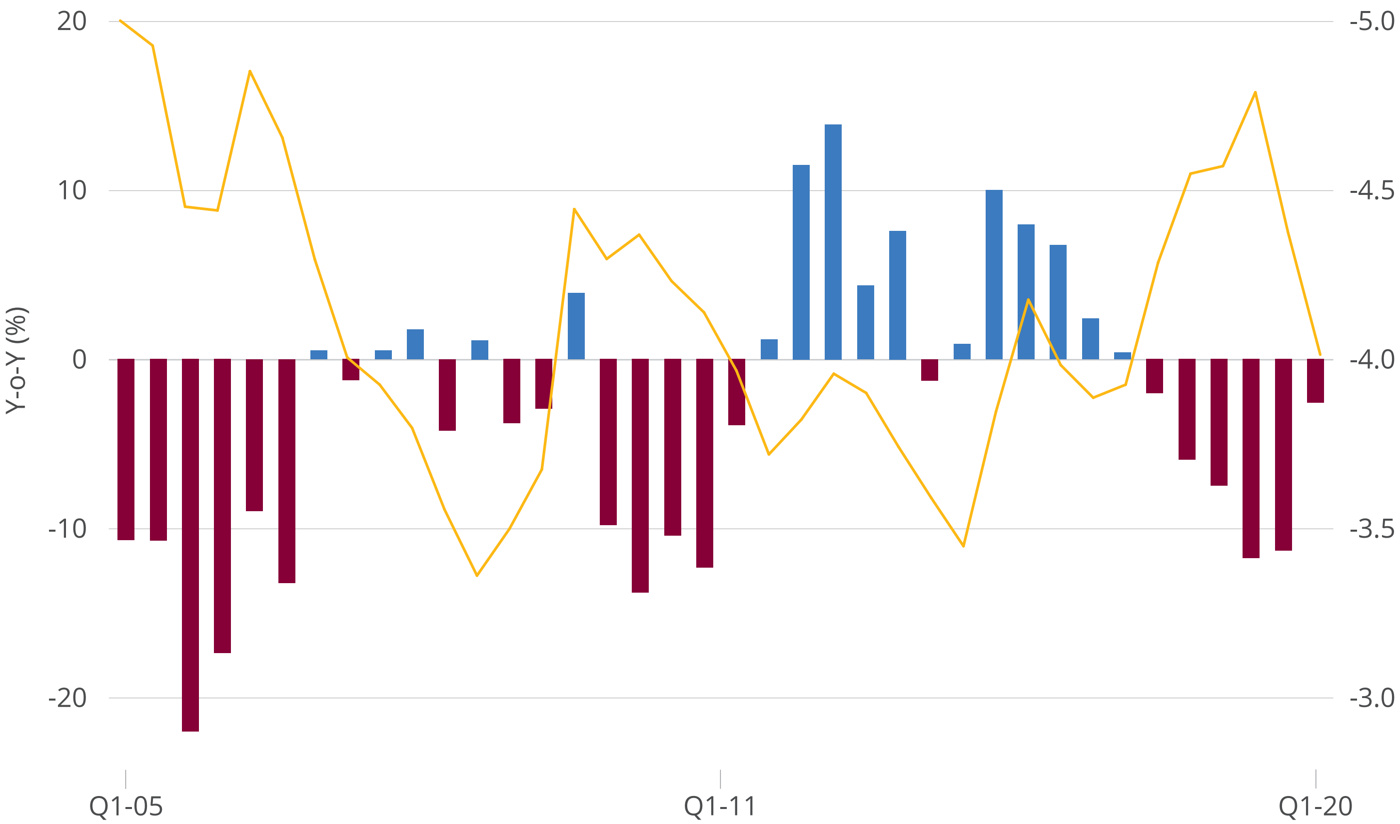


YEAR TO YEAR HOUSEHOLD EMPLOYMENT GROWTH: INLAND EMPIRE
JUL-17 TO JUL-19
Source: California Employment Development Department , Analysis by UCR Center for Forecasting

available data being for March 2019. Comparing these sources for March 2019, the latest period for which data is available from both sources, the CES shows that total private employment in the Inland Empire increased 1.3%, while the QCEW shows a more robust gain of 2.6%, twice as fast as CES estimates suggest.

The upshot of this is that monthly figures for the Inland Empire may be underestimating current employment growth trends, so the region may be growing more quickly than the official figures suggest. Moreover, because the survey-based CES estimates are benchmarked each year to the QCEW, there is a good chance that the CES data will be revised up when the annual benchmarking process takes place. However, because that process will occur in March of next year, it's highly likely that official estimates will underestimate the region's employment picture over the next few months.

It should also be noted that data on unemployment rates and household employment are also derived from a survey, the so-called Household Survey, which is different from the CES program described above. The chart above displays year-to-year changes in household employment



EXISTING HOME SALES YEAR TO YEAR GROWTH
INLAND EMPIRE, Q1-10 TO Q2-19
Source: Freddie Mac, DataQuick, Analysis By UCR Center for Forecasting

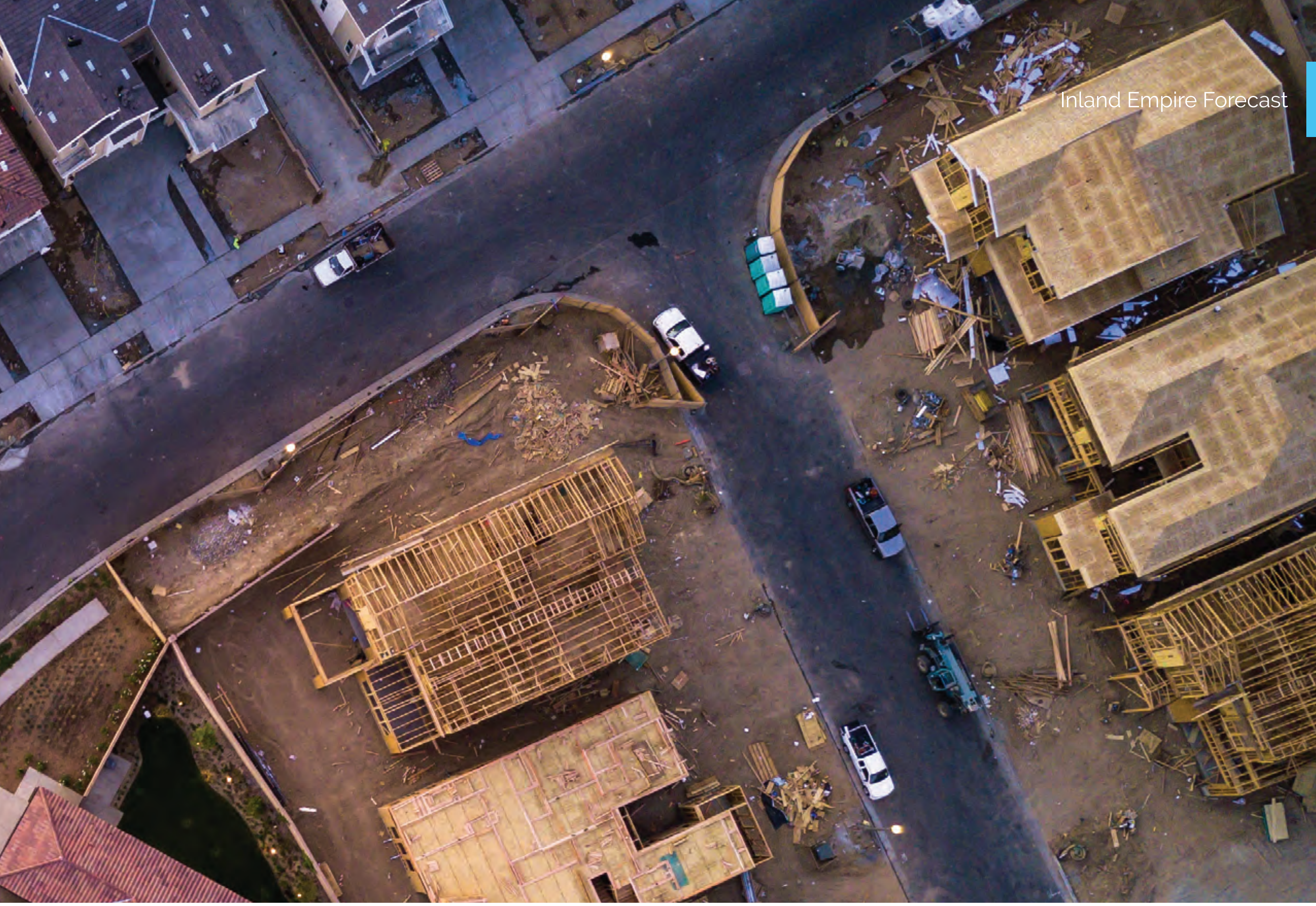
(employment on the basis of where residents live) across Southern California's major counties. The figures suggest a slowdown across all counties beginning at roughly the same time. Such a synchronized trend is unusual and is at odds with declines in the regional unemployment rate which, for the most part, is trending at or near record lows. The Center anticipates that these estimates will also be revised at a later date.

Despite concerns over the data, one thing is clear: the Inland Empire economy has gained momentum as the year has progressed, and the labor market is essentially at full employment. Moreover, while Health Care, Logistics, and Government have led the region in job gains, the expansion continues to be broad-based, with job losses in a few sectors that are small in relation to the region's job base of 1.55 million. Increases in taxable sales also reflect continued spending by households and businesses as the regional economy has expanded in conjunction with growth at the national and state levels.

Despite the solid performance of the Inland Empire economy, the region's housing market is a matter for concern. This is not unique to the Inland Empire – housing has lagged both locally and nationally

for quite some time, with real private residential fixed investment in the national economy reaching a post-recession high in the fourth quarter of 2017. Since then, residential investment has declined for six consecutive quarters. And at the state level, construction has pulled back sharply, with residential permits in the first half of 2019 down 17.4% compared to the same period last year. Given current economic conditions and improvements in household balance sheets, we expect housing to continue to improve, but substantial improvements in the broader housing markets remain to be seen.

Weakness in the local real estate market is most apparent in sales activity for existing single-family homes, which account for the lion's share of residential transactions. Year-to-date sales of existing single-family homes in the Inland Empire were down 6.4% in the first half of 2019 compared to 7.2% in the state. What are the reasons for this weakness? Some of the pull-back in housing can be traced to the lingering effects of last year's sharp rise in interest rates. Rising mortgage rates throughout 2018 probably had an impact on overall sales, but the increase in rates over the course of 2018 has largely been erased, with rates now at their lowest point in over a year. The reduction in



mortgage rates has resulted in a spike in mortgage refinancing, which, broadly speaking, bodes well for household finances as owner households will now have extra disposable income to spend elsewhere in the local economy.

It's also worth noting that declining sales in the Inland Empire are not necessarily abnormal. Taking home sales data beginning in 2010, when the economy started to recover, one thing is clear: home sales experienced spells of positive and negative growth despite broader economic conditions. Indeed, the chart on page 18 plots year-over-year changes in seasonally adjusted sales of existing single-family homes, a visualization of the ebb and flow of the housing market.

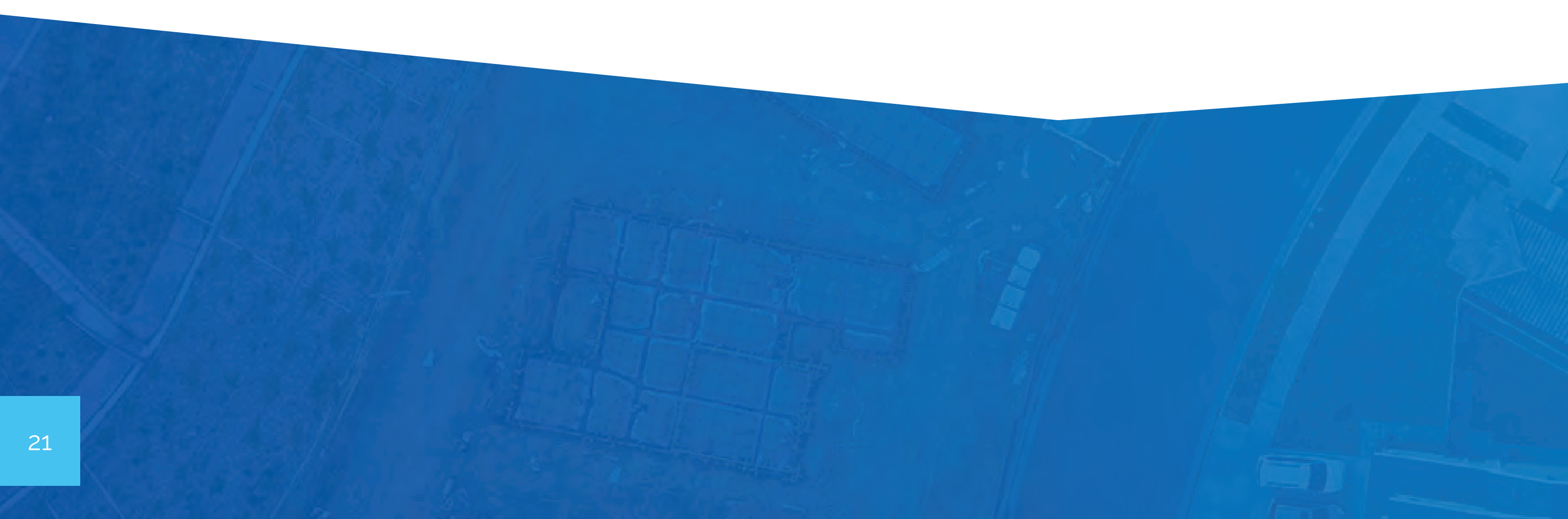
Recent tax policy could also be holding the housing market back. Under the provisions of the Tax Cuts and Jobs Act, changes to the standard deduction, the new $10,000 cap on the deductibility of state and local taxes, and the lower limit on the amount of mortgage debt on which interest is deductible, can all profoundly affect areas with higher-priced homes and high-tax jurisdictions by increasing the cost of home ownership. Researchers at the New York Federal Reserve have found evidence to suggest that changes in federal tax laws enacted in December 2017 have contributed to the slowdown of the housing market throughout 2018[1].

The Center believes that the housing market will improve marginally in the near future. Outside of a major recession, home prices tend to stay positive. And, broadly speaking, the drop in interest rates should stimulate the housing market in the coming quarters. The relationship is not instantaneous – there is a lag in response time – but we remain cautiously optimistic that the housing market will improve. In fact, according to the California Association of Realtors, there are signs that lower rates and soft prices will push sales up in the second half of the year, with monthly sales increasing year-over-year in both July and August. Sales of existing homes are likely to trend close to 57,000-59,000 next year, while the annual home price will likely stay below $400,000 for the next few years.

The last thing to consider for the region's outlook is the impact of the ongoing trade war with China. While the Inland Empire has become an important conduit for goods movement in Southern California, it's our view that concerns over the trade war's impact on the region are unfounded. The trade war has caused a minor disruption in trade flow between the US and China, but from a macroeconomic perspective, the overall impact has been negligible. There has been a noticeable shift in imports from China to Vietnam, and the depreciation in the yuan has offset the sting from the tariffs that have been imposed so far.

It should also be borne in mind that although the trade war has been underway since March of last year, employment in the logistics sector has been growing at a robust pace. The pace of growth may have slowed recently, but that was to be expected, as double-digit rates

[1] Richard Peach and Casey McQuillan, 'Is the Recent Tax Reform Playing a Role in the Decline of Home Sales?' Federal Reserve Bank of New York Liberty Street Economics (blog), April 15, 2019, https://libertystreeteconomics.newyorkfed.org/2019/04/is-the-recent-tax-reform-playing-a-role-in-the-decline-of-home-sales.html.



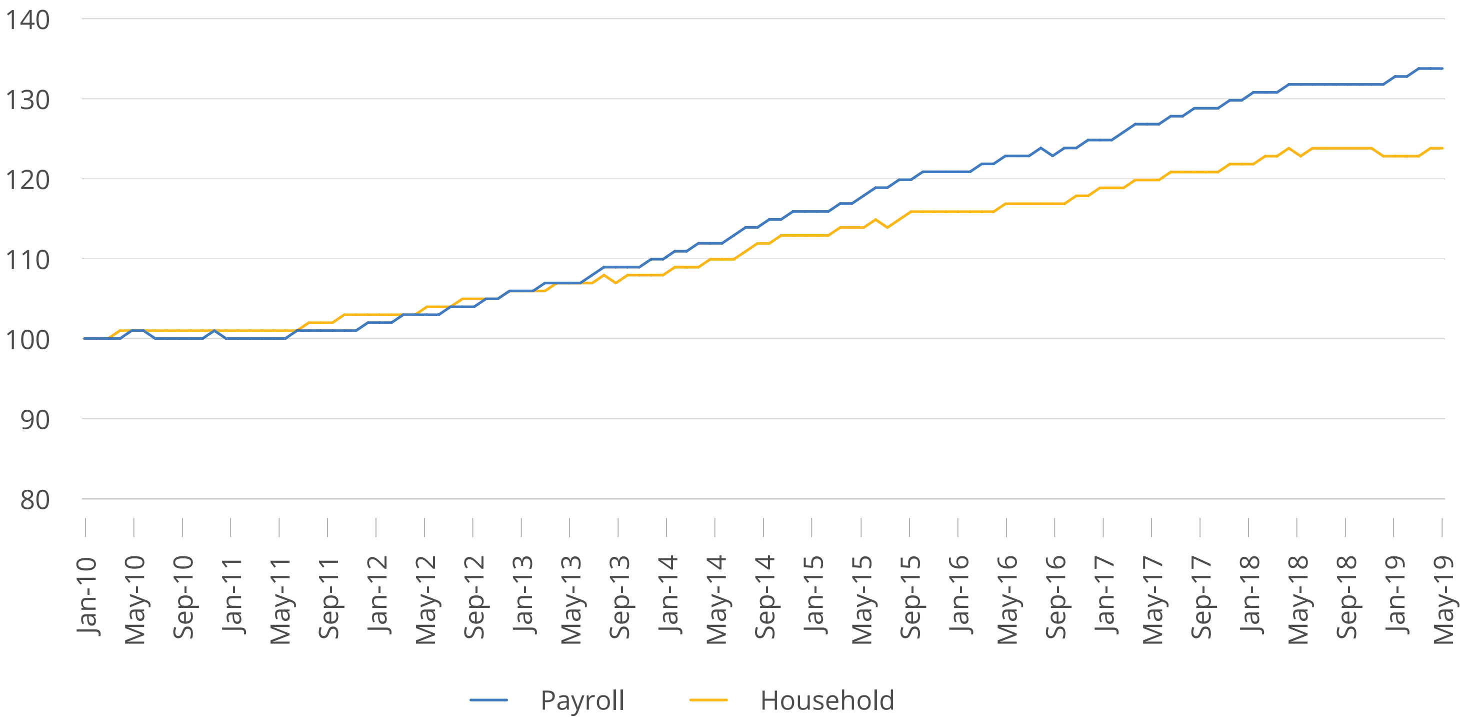
of employment growth are hardly sustainable. In sum, Logistics will continue to be a leading sector in the Inland Empire. Despite a minor hiccup in trade flow at the state level, a sizable increase in e-commerce spending both locally and abroad will keep air cargo and ground transit stable in the near term.

Despite continued calls for a recession in near term, the Center expects the Inland Empire economy to grow in the coming years. The pace of growth is slow, but that is to be expected when the economy is operating at full employment and the unemployment rate is trending at record lows both regionally and nationally. While the trade war has caused disruptions to certain industries and companies, there is little chance of it causing a recession since US exports to China represent less than one percent of GDP. The recent inversion of the yield curve has caused considerable consternation. But the Federal Reserve has indicated that monetary policy will be accommodative, and markets now expect the Federal Reserve to cut rates in late 2019 and in the first quarter of 2020, which should ease fears of a recession (the Federal Reserve has indicated it will "do what it takes" to sustain the expansion). Housing will remain a key challenge both regionally and locally. We are currently seeing a new wave of affordable housing measures crop up in municipalities across California, but these local ordinances are addressing the symptoms of a much larger problem: California simply does not have enough housing, affordable or otherwise. The Inland Empire is no exception. It must continue to add to its housing stock in order to manage the cost of housing in the state that makes it more difficult and costly for businesses to recruit and retain the talent they need to succeed in today's economy.

Inland Empire **Employment**

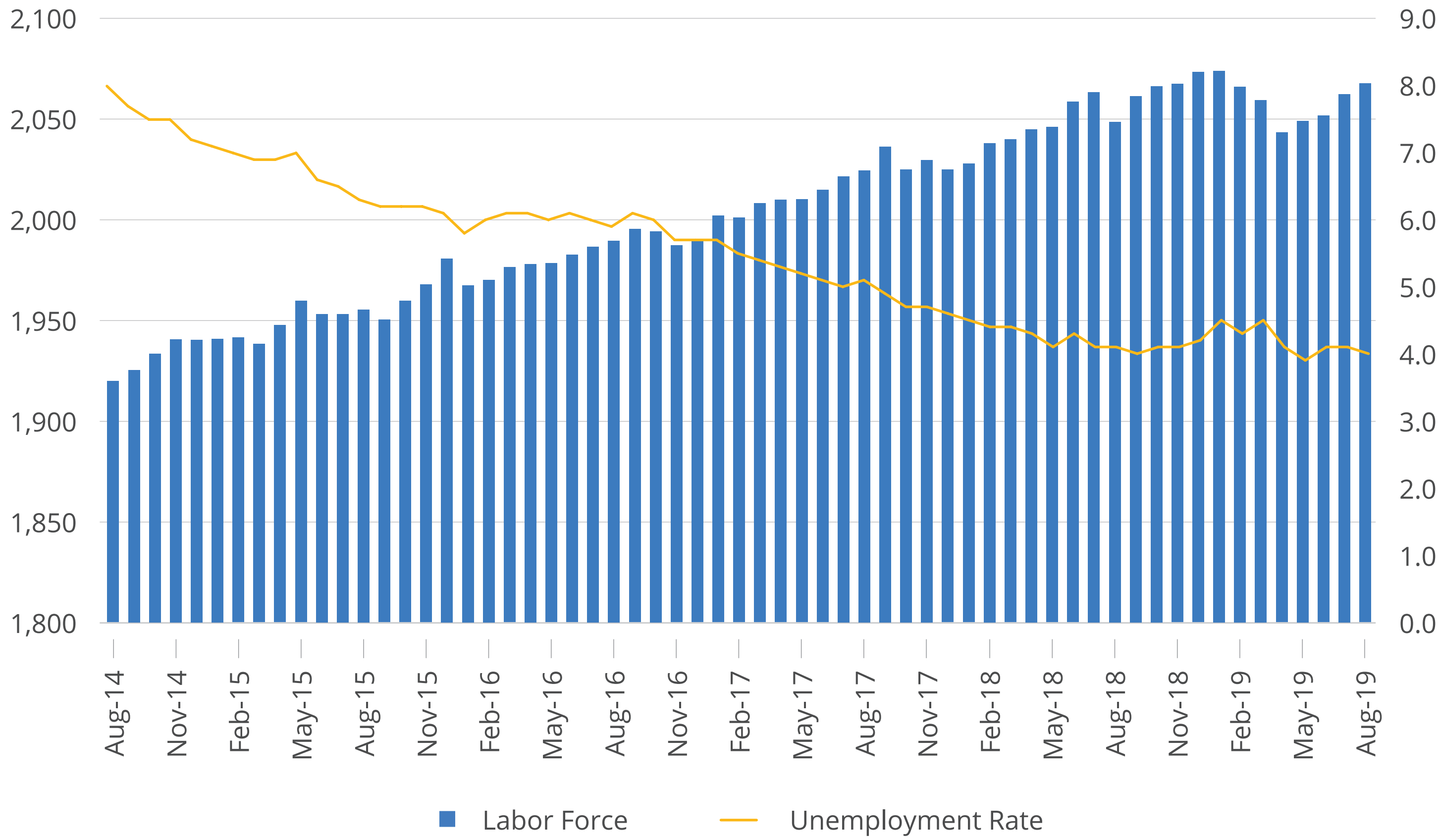
The Inland Empire's economy continues to expand at a healthy pace, despite headline-grabbing predictions that a recession is just around the corner. Led by Health Care, Government, and Logistics, nonfarm employment in the Inland Empire increased 2.1% from August 2018 to August 2019, surpassing both the state's 1.8% and the nation's 1.4% increases over the same period. Still, growth has slowed over the last year, as it has in many parts of the state, trailing the 3.3% growth in nonfarm employment last year (August 2017 to August 2018).

The rate of growth in nonfarm employment in the Inland Empire also continues to outpace that of household employment. Nonfarm employment grew by 31,000 from August 2018 to August 2019, while household employment increased by 21,900 over the same period. Household employment growth is now half that of last year, shrinking from 2.2% to 1.1% according to the latest figures. This implies that local businesses are hiring workers faster than local residents are finding work.



INLAND EMPIRE PAYROLL VS. HOUSEHOLD EMPLOYMENT
JAN-10 TO AUG-19
Source: California Employment Development Department, Analysis By UCR Center for Forecasting

Along with rising levels of nonfarm and household employment, the Inland Empire's labor force has also expanded. From August 2018 to August 2019, it expanded 0.9%, down from the 1.2% increase of last year, but outpacing the -0.2% decline in the state overall. Although the relative affordability of the Inland Empire has insulated it from the flat labor force growth in many parts of the state, additional housing units will be necessary to ensure further growth. High housing costs continue to hamper the efforts of many state employers to attract the talent they need, and the Inland Empire is facing challenges to future economic growth because of escalating home prices and rents relative to incomes.



INLAND EMPIRE LABOR FORCE AND UNEMPLOYMENT RATE
AUG-14 TO AUG-19
Source: California Employment Development Department, Analysis by UCR Center for Forecasting

Despite growth in the labor force, the region's unemployment rate remained steady over the last year, standing at 4.0% as of August 2019, just above the all-time low of 3.9% and just below the state's unemployment rate. This is somewhat higher than nearby Orange County (2.7%) and San Diego County (3.1%), but slightly lower than Los Angeles County, where the rate was 4.4%.

Current Industry Trends

Economic expansion in the Inland Empire continues to create opportunities for local residents across a spectrum of skill sets. Over the last year, employment has expanded over a broad range of sectors, and with nonfarm employment growth outpacing household employment growth, many of these opportunities are going to local residents. This has the potential to reduce commute times and enhance quality of life.

MSA	Aug. '19	YTY % Change	YTY Change
Health Care	234.4	5.4%	12.1
Government	263.1	2.2%	5.7
Leisure and Hospitality	174.7	2.4%	4.0
Transport,Warehouse,Util.	137.7	3.0%	4.0
Admin Support	104.0	2.8%	2.9
Prof Sci and Tech	44.3	4.8%	2.0
Manufacturing	102.8	1.2%	1.2
Educational Services	20.7	3.3%	0.7
Financial Activities	44.1	1.4%	0.6
Management	8.4	0.8%	0.1
NR/Mining	1.2	-0.4%	0.0
Information	11.2	-0.6%	-0.1
Retail Trade	181.4	-0.1%	-0.1
Construction	104.8	-0.5%	-0.5
Wholesale Trade	64.4	-1.2%	-0.8
Other Services	44.9	-1.8%	-0.8

INLAND EMPIRE - EMPLOYMENT BY INDUSTRY
Source: California Employment Development Department, Analysis by UCR Center for Forecasting

The region's health care sector added the most jobs last year, increasing payrolls by 5.4% (12,100 positions). This year's gains and are well ahead of the 2.8% growth in the state over the same period, but trailed last year's increase of 6.5%

With more revenue flowing into local coffers, government payrolls are also increasing. This is a welcome sign, because the government sector is the largest source of nonfarm jobs in the region. From August 2018 to August 2019, government payrolls increased 2.2% (5,700 positions) in the Inland Empire, outpacing the 1.6% statewide rate of growth over the same period and increasing from the 1.9% growth rate the previous year. Local government (3,800 positions) was responsible for the most jobs added over the last year, while state government (5.1%) led in terms of growth rate.

Transportation, Warehouse and Utilities had a strong year as well. From August 2018 to August 2019, payrolls grew 3.0% (4,000 positions), outpacing the 1.9% growth in the state overall. This sector is also poised for continued growth with 5.7 million square feet of warehouse space completed during the first half of 2019, a 1.4% increase over levels at the end of 2018. The sector is a significantly larger source of jobs in the Inland Empire than it is in other parts of the state, accounting for 8.8% of total nonfarm jobs compared with 3.9% in the state overall. Major players like Amazon continue to fuel these gains; the company announced plans to expands its air delivery operations at March Air Force Base in Riverside, operating six flights per day at the end of 2018[2]. FedEx is also expanding at Ontario Airport, building a 51-acre facility that almost triples its capacity for cargo storage and sorting, and equipment maintenance[3].

Leisure and Hospitality also continues to grow in response to growth in jobs and discretionary household income. From August 2018 to August 2019, the sector grew 2.4%, adding 4,000 positions. This marks a slight increase from last year's growth of 2.3% and puts the Inland Empire just behind the 2.5% rate in the state over the same period. Food Services and Drinking Places were responsible for most of the gains in Leisure and Hospitality payrolls, with restaurants and limited-service eating places adding 3,300 positions each over the last year.

Administrative Support also posted sizeable gains last year, boosting payrolls by 2.8% (2,900 positions) from August 2018 to August 2019. This trails the state's 2.6% growth over the same period and marks a slight increase from the 2.7% growth in the region last year.

Professional, Scientific, and Technical Services posted a sizeable gain, increasing payrolls by 4.8% (2,000 positions). This outshines the 3.6% growth in the state over the same period but was somewhat slower than the 5.3% growth rate in the region last year.

Although most of the region's industries continued to grow steadily over the year, a handful lost jobs. Notably, Other Services fell by 0.8% (-1,800 positions) and Wholesale Trade fell by 0.8% (-1,200 positions). In addition, after posting robust gains last year, Construction payrolls have seen little change so far this year, falling by 0.5% (-500 positions) year-over-year in August.

[2] McMillan, R., & Kabc. (2018, October 11). Amazon Air to start operations at March Air Reserve Base. Retrieved from https://abc7.com/business/amazon-air-to-start-operations-at-march-air-reserve-base/4456840/

[3] Scauzillo, S. (2019, September 24). FedEx expanding operations at Ontario airport but old military buildings are roadblocks to future projects. Retrieved from https://www.dailybulletin.com/2019/09/24/fedex-building-new-cargo-sorting-facility-at-ontario-airport-but-many-old-military-buildings-stand-as-roadblocks-to-future-projects/

Establishment Growth

Along with growing employment levels, business formation in the Inland Empire continued across a broad range of industries in 2018. The number of establishments increased 4.8% from 2017 to 2018, outpacing the state (2.5%) and nation (1.8%). This is partly due to key industries in the region growing faster than the overall economy, but is also because the region's faster rate of population growth spurs new business opportunities. The number of establishments grew 5.4% in Riverside County, and 4.2% in San Bernardino County.

Industry	2018 Establish-ments	1-Year Change (%)	2-Year Change (%)
Riverside County, California	65,889	5.4	11.5
San Bernardino County, California	60,303	4.2	9.0
Total	**126,192**	**4.8**	**10.3**
Transport,Warehouse,Util.	3,412	16.9	27.0
Educational Services	792	13.7	18.7
NR/Construction	9,174	12.7	19.2
Real Estate	3,827	12.6	17.5
Admin Support	4,412	9.2	15.2
Other Services	6,145	8.8	11.5
Prof Sci and Tech	6,764	8.6	12.6
Wholesale Trade	4,656	8.4	12.0
Leisure and Hospitality	8,381	7.8	12.6
Health Care	57,068	7.4	17.0
Finance and Insurance	3,317	6.2	10.0
Manufacturing	3,691	5.9	7.8
Retail Trade	9,984	4.4	6.5
Management	264	3.8	9.7
Information	767	3.1	10.4
Government	2,901	0.6	1.1

INLAND EMPIRE - ESTABLISHMENTS BY INDUSTRY
Source: U.S. Bureau of Labor Statistics, Analysis by UCR Center for Forecasting

Growth was spread across all industries in the Inland Empire. Transportation, Warehouse and Utilities led, growing 15.2% from 2017 to 2018.

Establishments increased in Educational Services (13.0%), NR/Construction (12.9%), and Real Estate (12.0%).

Professional, Scientific, and Technical Services, and Administrative Support expanded at a healthy pace over the last year, growing by 8.8% and 8.6% respectively.

Leisure and Hospitality also had an increase in establishments over the last year, growing 7.5% from 2017 to 2018.

Establishment growth was more modest for Information (2.3%), and Government (0.8%).

Wages

With moderate inflation levels and labor markets tightening, there has been upward pressure on wages in the Inland Empire. From 2017 to 2018, the average annual wage across all industries grew 2.6% to just over $46,000. This was well behind the state (4.1%) and the nation (3.4%), mainly because the composition of industry in the region differs from that of the state and the nation. Wage increases in San Bernardino County led the way, growing 2.8%, while wages in Riverside County rose 2.4%. Wage gains have been distributed across a broad range of sectors, for entry level, middle-wage and high-wage occupations and industries.

Industry	2018 Avg. Annual Wage	1-Year Change (%)	2-Year Change (%)
Riverside County, California	$45,097	2.3	4.9
San Bernardino County, California	$46,906	2.8	5.1
Total	**$46,010**	**2.5**	**5.0**
Managment	$80,504	5.3	9.4
Real Estate	$49,601	4.8	9.8
Leisure and Hospitality	$21,656	4.2	7.4
Admin Support	$33,671	4.0	12.1
Government	$61,218	3.5	5.7
NR/Construction	$55,502	3.2	7.5
Other Services	$35,881	2.9	6.4
Prof Sci and Tech	$64,229	2.8	8.9
Retail Trade	$32,394	2.8	4.9
Finance and Insurance	$65,839	2.3	-0.3
Health Care	$45,882	2.2	2.5
Educational Services	$44,213	1.8	6.4
Transport,Warehouse,Util.	$44,345	1.7	-1.1
Manufacturing	$55,756	1.4	5.8
Information	$56,127	-1.0	1.6
Wholesale Trade	$59,014	-3.1	3.6

INLAND EMPIRE - ESTABLISHMENTS BY INDUSTRY
Source: U.S. Bureau of Labor Statistics, Analysis by UCR Center for Forecasting

Growth was spread across most industries in the Inland Empire. Management led the way, with average annual wages up 5.3% from 2017 to 2018.

Other sectors posting sizable wage gains in 2018 were Real Estate (4.7%), Administrative Support (4.3%), Leisure and Hospitality (4.3%), Government (3.5%), and NR/Construction (3.1%).

Over the last year wage gains were more modest in Health Care (2.2%) and Transportation, Warehouse and Utilities (1.9%).

Although average annual wages continued to grow at a steady pace in most sectors, they fell in Wholesale Trade (-3.3%) and Information (-1.1%) from 2017 to 2018.

Inland Empire **Business Activity**

Throughout 2019, the Inland Empire economy saw steady growth and low unemployment. The regional economy may be advancing more slowly compared to previous years, but many business sectors have exhibited steady, if not strong, growth so far this year. Overall taxable sales have increased significantly, and are now among the highest in Southern California. In terms of sales tax receipts, Business and Industry, Restaurants and Hotels, and General Consumer Goods recorded the highest year-over-year growth rates in the Inland Empire between 2018 and 2019.

Ontario International Airport has seen tremendous growth since increasing domestic and international connections. Ontario International boasts the fastest growth in passenger traffic in Southern California, surpassing both Los Angeles International Airport (LAX) and Orange County's John Wayne Airport.

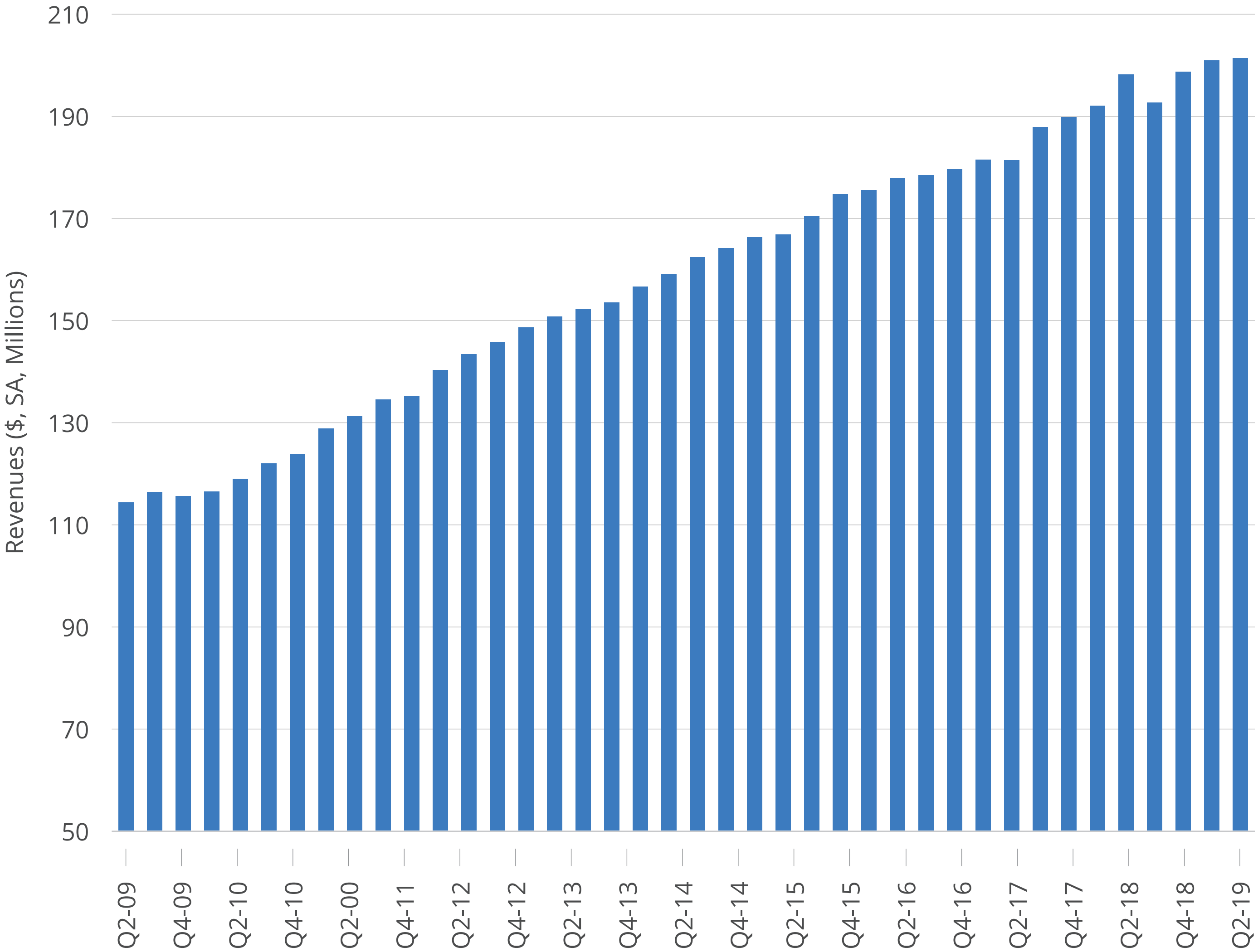
Business by the Numbers

Between the first quarter of 2018 and the first quarter of 2019, total taxable sales in the Inland Empire increased by 8.2%, generating over $21.1 billion in revenue. After Los Angeles' $44.3 million, the Inland Empire's taxable sales were the second highest in Southern California, reflecting its ranking as the second largest metro area by population. The region's year-over-year increase surpassed gains in both Orange County (6.5%) and Los Angeles (7.9%). Only San Diego County outpaced the Inland Empire between 2018 and 2019, with an increase of 9.6%.

As the Inland Empire's business activity grows, so do its tax receipts. Between the second quarter of 2018 and the second quarter of 2019, total sales tax receipts in the Inland Empire grew by 3.0%, reaching over $200 million. The largest year-over-year increase occurred in Business and Industry, which increased by 4.2% to $35.0 million in the second quarter of 2019, the second highest revenue total after General Consumer Goods ($39.9 million). Restaurants and Hotels also made a solid contribution, generating $21.9 million in sales tax during the second quarter of 2019, with a year-over-year growth of 3.7%. Increases in household and business spending are the result of improved economic activity in the region. Household earning have been higher, leaving more room for discretionary spending. Business and Industries have gained more resources to expend on conferences, seminars and other opportunities for growth in human capital. Fuel and Service Stations had a solid year-over-year growth of 1.2%, with receipts reaching over $20 million in the second quarter of 2019. This indicates that gas prices are leveling off, following the first three quarters of 2018 during which fuel costs increased heavily before declining steeply towards the end of the year.

Metro Region	Q1-2019 Taxable Sales ($, Millions)	1-Year % Growth	YTY % Change
San Diego	16,142	9.6	1.8%
Inland Empire	21,156	8.2	3.2%
Los Angeles (MD)	44,299	7.9	3.6%
Orange County (MD)	17,930	6.5	-0.7%

TAXABLE SALES BY COUNTY: Q1-2019
Source: California Department of Tax and Fee Administration, Analysis by UCR Center for Forecasting



TOTAL SALES TAX RECEIPTS INLAND EMPIRE
Q2-09 TO Q2-19
Source: Freddie Mac, DataQuick, Analysis By UCR Center for Forecasting

Category	Q2-2019 Sales Tax Receipts ($, Millions)	1-Year % Growth
Total	206.4	3.0
Business and Industry	35.0	4.2
Restaurants and Hotels	21.9	3.5
General Consumer Goods	39.9	2.2
Food and Drugs	9.2	1.6
Fuel and Service Stations	20.2	1.2
Building and Construction	20.3	0.8
Autos and Transportation	33.3	0.6

INLAND EMPIRE SALES TAX RECEIPTS: Q1-2019
Source: HdL, Analysis by UCR Center for Forecasting

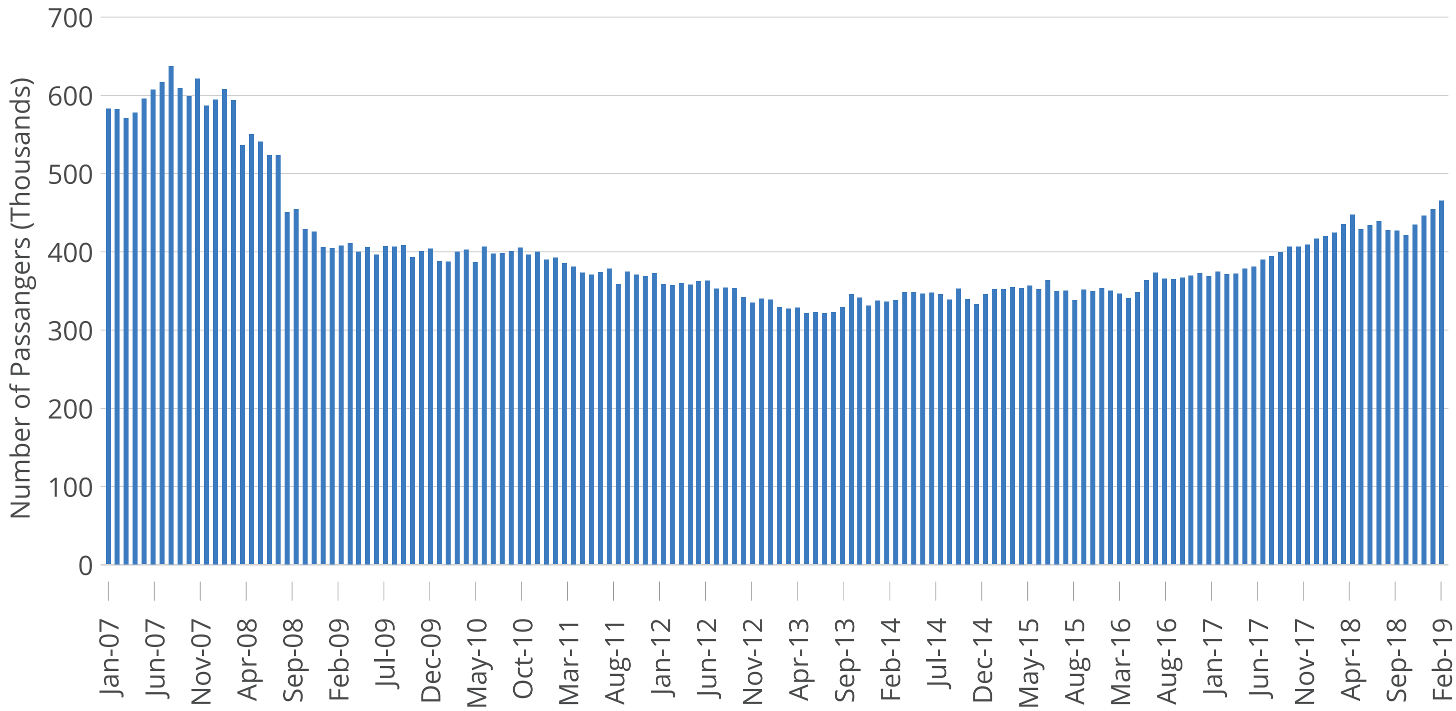
SPOTLIGHT

Ontario International Airport

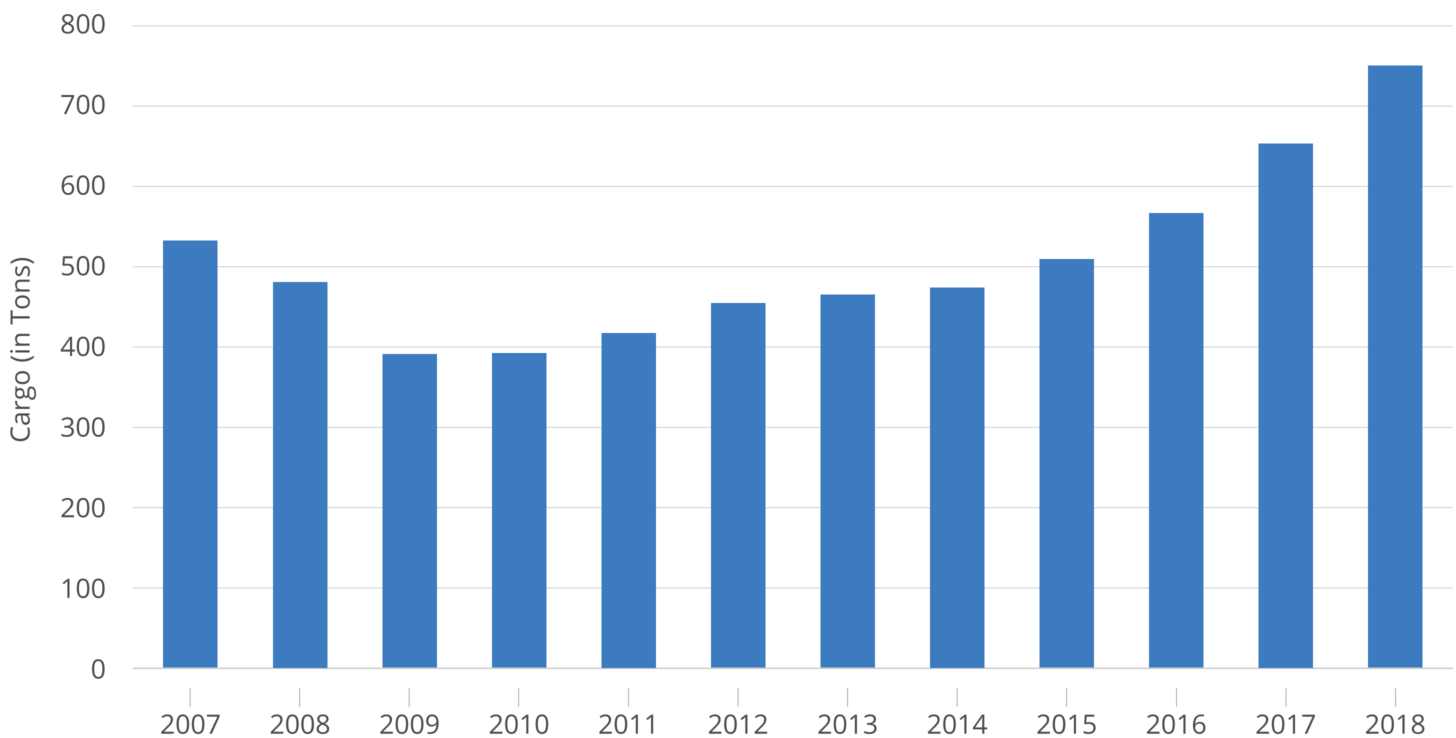
Of all the industrial and business developments in the Inland Empire, the growing importance of Ontario International Airport (ONT) has showcased the region's emergence as a strong economic presence in Southern California. While passenger counts are still lower than LAX and John Wayne Airport (SNA), Ontario International has experienced significant increases in passenger traffic and cargo activity.

Between June 2018 and June 2019, the airport's total number of passengers grew by 9.6%. Domestic passenger growth reached 9.5%, while recent route arrangements between Ontario and China boosted international passenger growth to 11.8%. By comparison, passenger traffic at LAX increased by 0.3%, while SNA's passenger growth contracted by 3.4% over the same period. ONT's domestic passenger counts have also expanded. Passengers can now fly directly from Ontario to New York with JetBlue, and to Newark direct with Frontier. Steady growth in route options, as well as the airport's central location, has made Ontario an attractive alternative for passengers flying out of Southern California.

Non-passenger transportation has also increased significantly at ONT. Between 2018 and 2019, total freight tonnage increased by 14.8% to 751,500 tons. Since the Great Recession, growth in freight transportation at ONT has been remarkable. Since 2009, the amount of freight cargo transported in tons to and from ONT has increased by 92.2%. Serving as the hub for UPS cargo flights to China, as well as shipping centers for Amazon and FedEx, ONT's cargo operations are likely to continue growing as long as demand remains high.



TOTAL PASSENGER TRAFFIC ONTARIO INTERNATIONAL AIRPORT
JAN-07 TO JUN-19
Source: VisitCalifornia, Analysis By UCR Center for Forecasting



TOTAL FREIGHT (IN TONS) ONTARIO INTERNATIONAL AIRPORT
2007 TO 2018
Source: FlyOntario, Analysis By UCR Center for Forecasting

Inland Empire **Residential Real Estate**

With the fastest growing population in Southern California, and net migration far exceeding neighboring metro areas, the Inland Empire is one of the most attractive destinations in the region. Yet because the supply of new housing falls short of demand, home prices and rents have both increased substantially in recent years. Sales declined throughout the first half of 2019, despite falling interest rates. The lack of new construction is particularly pronounced in the single-family segment, while multifamily permits have been strong during the first half of the year, with significant growth in both Riverside and San Bernardino counties. The rental market continues to see increased demand, as evidenced by the strong uptick in multifamily permits. However, vacancy rates remain low, specifically in areas closer to Los Angeles, meaning supply is still not catching up with demand.

For Sale Housing Market

After increasing through most of 2018, mortgage rates declined in the first three quarters of 2019 as interest rates fell in response to several developments, among them cuts in the Federal Funds Rate. Home sales responded slowly to lower rates in the first half of the year, not just in the Inland Empire but throughout Southern California. However, there are signs that lower rates and soft prices will push sales up in the second half of the year, with monthly sales increasing nationally year-over-year in both July and August, according to the California Association of Realtors.

Between the second quarter of 2018 and the second quarter of 2019, single-family home prices in the Inland Empire increased by 3.9%. This was the largest percentage increase in Southern California, ahead of San Diego (2.0%), Los Angeles (0.8%), and Orange County (0.6%). The story is the same for condominiums, with the Inland Empire's 5.0% price growth between the second quarter of 2018 and the second quarter of 2019 overshadowing Los Angeles (-0.5%), San Diego (0.1%), and Orange County (0.5%).

`Home price growth in the Inland Empire has decelerated in recent quarters. The 3.9% yearly price gain in the second quarter of this year was considerably lower than the same period a year ago (6.5%) and two years ago (7.4%). Slower price appreciation, along with recent decreases in interest rates, adversely affected affordability so far this year.

These developments bode well for continued growth in the Inland Empire, which has become a hub for expansion both economically and demographically; the Inland Empire outpaces the rest of

Southern California in both overall population growth and absolute gains in net migration. It is no surprise that housing demand in the region is high, while a lack of growth in permits has constrained supply and driven prices up.

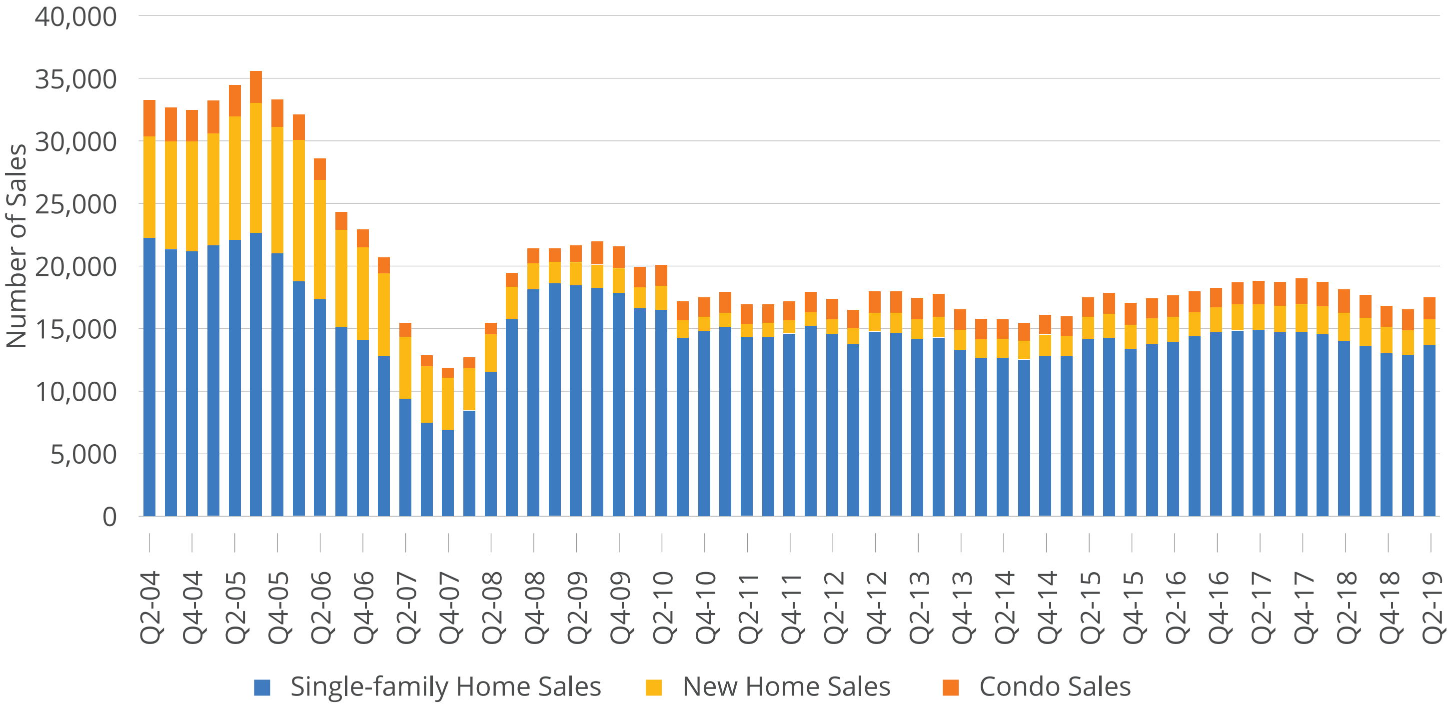
Still, homeownership is considerably higher in the Inland Empire than in other parts of Southern California. While recent levels of homeownership fall short of pre-recession highs, as of the first quarter of 2019, the Inland Empire boasts a significantly higher rate (61%) than both the Los Angeles/Orange County MSA (48%) and the San Diego MSA (53%). Homeownership in the Inland Empire has remained unchanged from the first quarters of both 2018 and 2017.

For Sale Market: **Key Points**

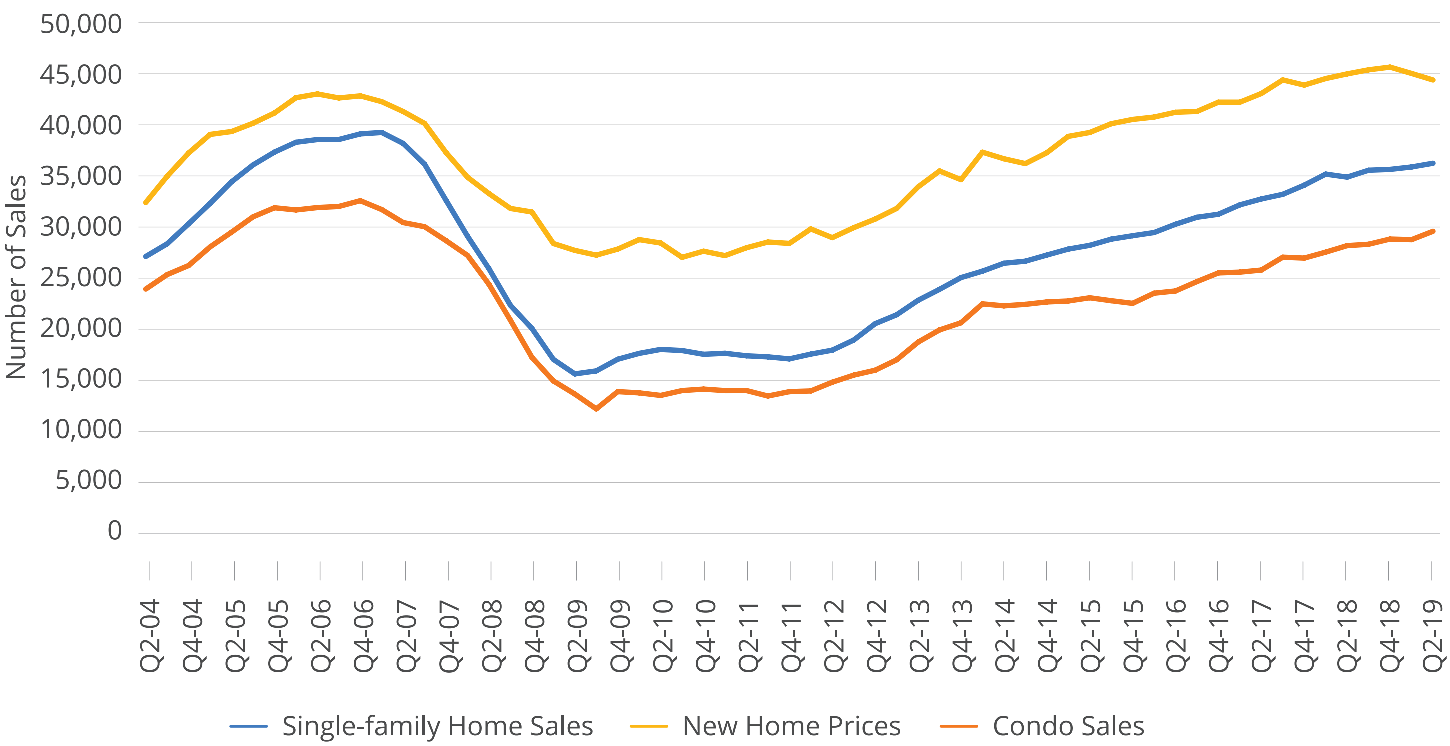
Existing single-family home sales dropped 7.0% in the Inland Empire from year-to-date 2018 to year-to-date 2019 (up to the second quarter), a smaller drop than Los Angeles (-9.0%) and Orange County (-10.3%) but larger than San Diego (-3.2%).

New home sales in the Inland Empire contracted by 10.0% between the first half of 2018 and the first half of 2019 (year-to-date second quarter), the result of a large decline in sales in San Bernardino County (-29.6%). Riverside was the only county in the Southern California market to experience an increase in new home sales, with a growth of 4.8% between the first half of 2018 and the first half of 2019 (year-to-date second quarter).

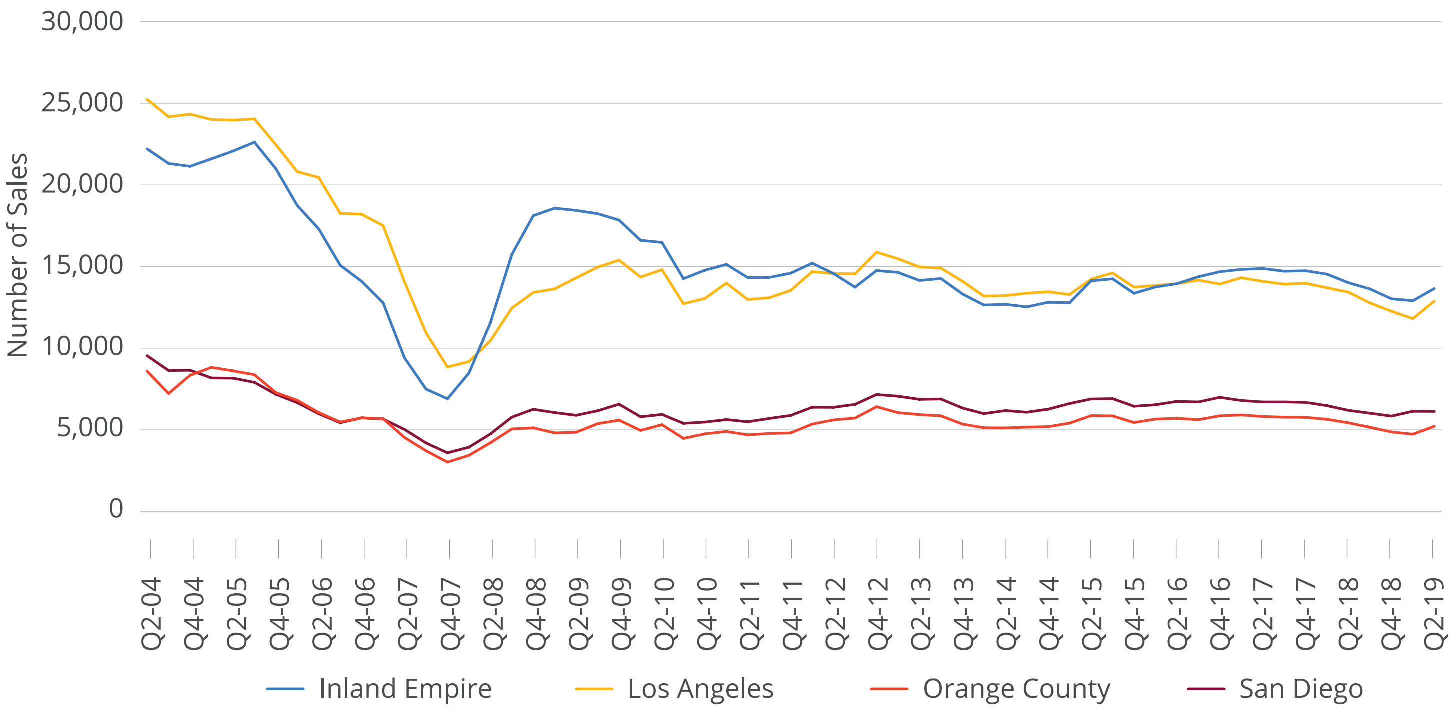
Condo sales in the Inland Empire contracted by 10.2% between the first half of 2018 and the first half of 2019, the mildest decline in the Southern California region compared to Los Angeles (-10.9%), Orange County (-11.2%) and San Diego (-12.5%).



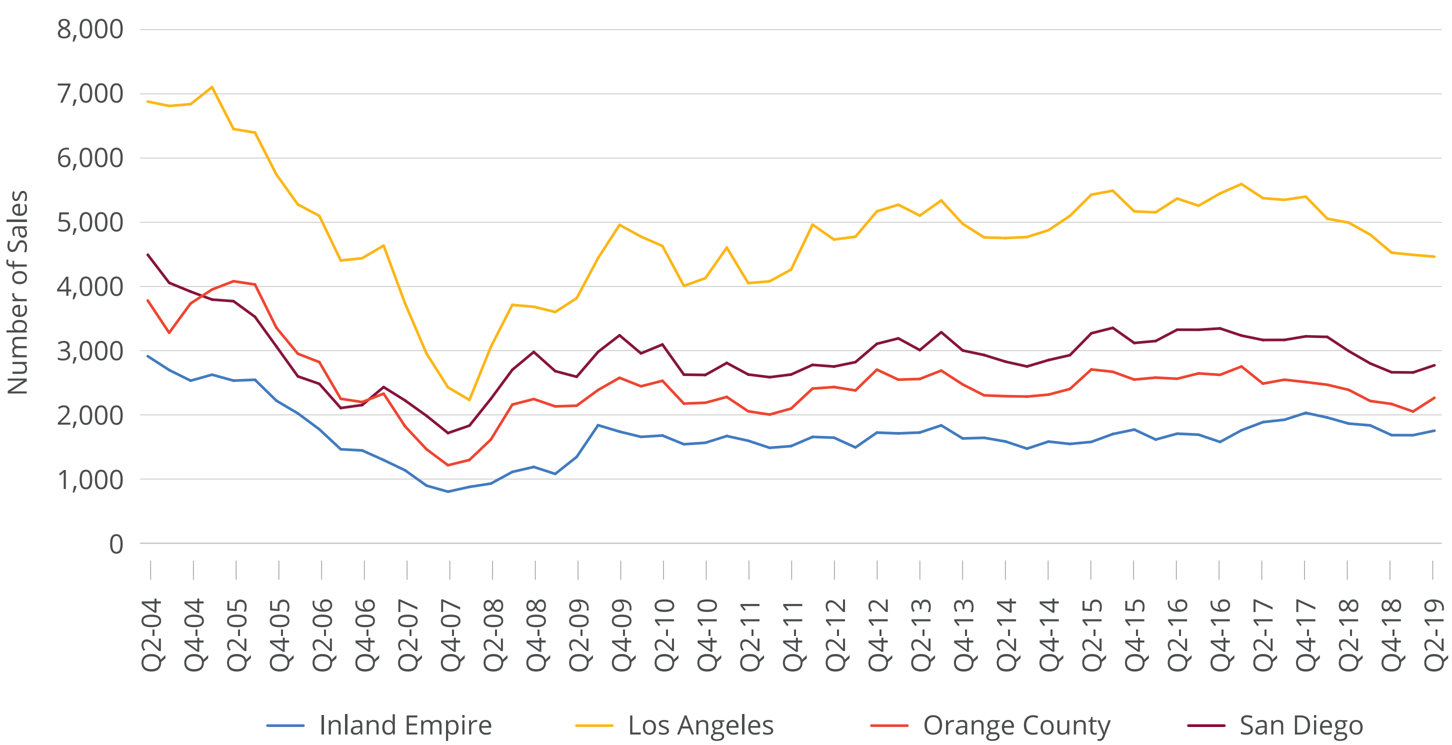
RESIDENTIAL REAL ESTATE SALES INLAND EMPIRE
Q2-04 TO Q2-19
Source: DataQuick, Analysis By UCR Center for Forecasting



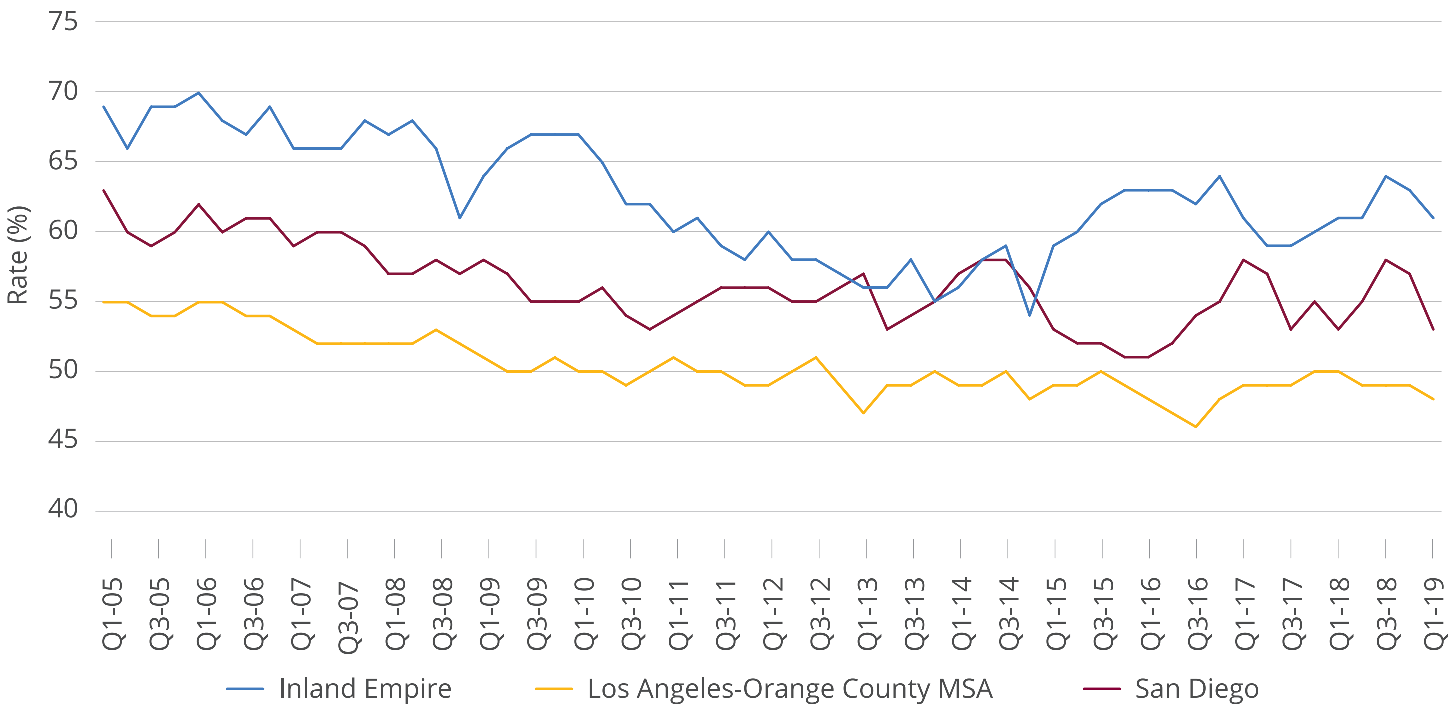
RESIDENTIAL REAL ESTATE MEDIAN HOME PRICES INLAND EMPIRE
Q2-04 TO Q2-19
Source: DataQuick, Analysis By UCR Center for Forecasting



EXISTING SINGLE-FAMILY HOME SALES CALIFORNIA AND SELECTED COUNTIES
Q2-04 TO Q2-19
Source: DataQuick, Analysis By UCR Center for Forecasting



EXISTING CONDOMONIUM SALES INLAND EMPIRE AND NEARBY COUNTIES
Q2-04 TO Q2-19
Source: DataQuick, Analysis By UCR Center for Forecasting



HOMEOWNERSHIP RATES SELECTED SOUTHERN CALIFORNIA MSAS
Q1-07 TO Q1-19
Source: U.S. Census Bureau Vacancy Survey, Analysis By UCR Center for Forecasting

Rental Market

The low cost of homeownership, certainly in comparison to neighboring regions such as Los Angeles and San Diego, is a highly attractive aspect of the Inland Empire. However, home prices have increased considerably over the last few years in both Riverside and San Bernardino counties, and some residents have looked to the rental market as a solution.

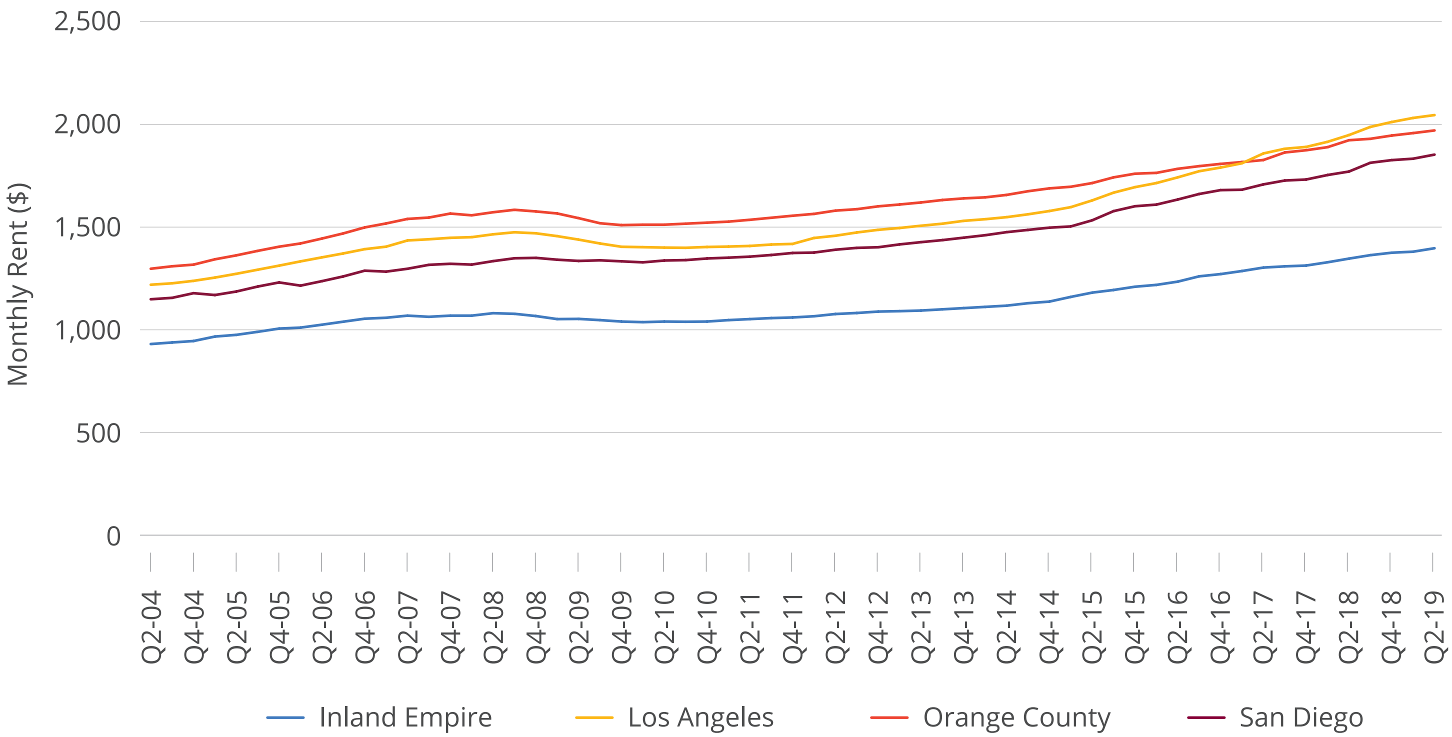
The number of renter occupied housing units in the Inland Empire increased by 2.9% between 2012 and 2017, with over 14,000 units added (roughly 3,000 units per year). In comparison, Los Angeles's equaled the Inland Empire at 2.9%, while San Diego outpaced both regions at 3.5% over the same five-year period. The Inland Empire's increase in owner-occupied housing was larger than renter-occupied units by both absolute and percentage growth. Between 2012 and 2017, the number of owner-occupied units increased by over 44,900, growing by 5.6%. This indicates that while interest in the rental market has increased in recent years, demand for homeownership remains significantly higher.

Rental Market: **Key Points**

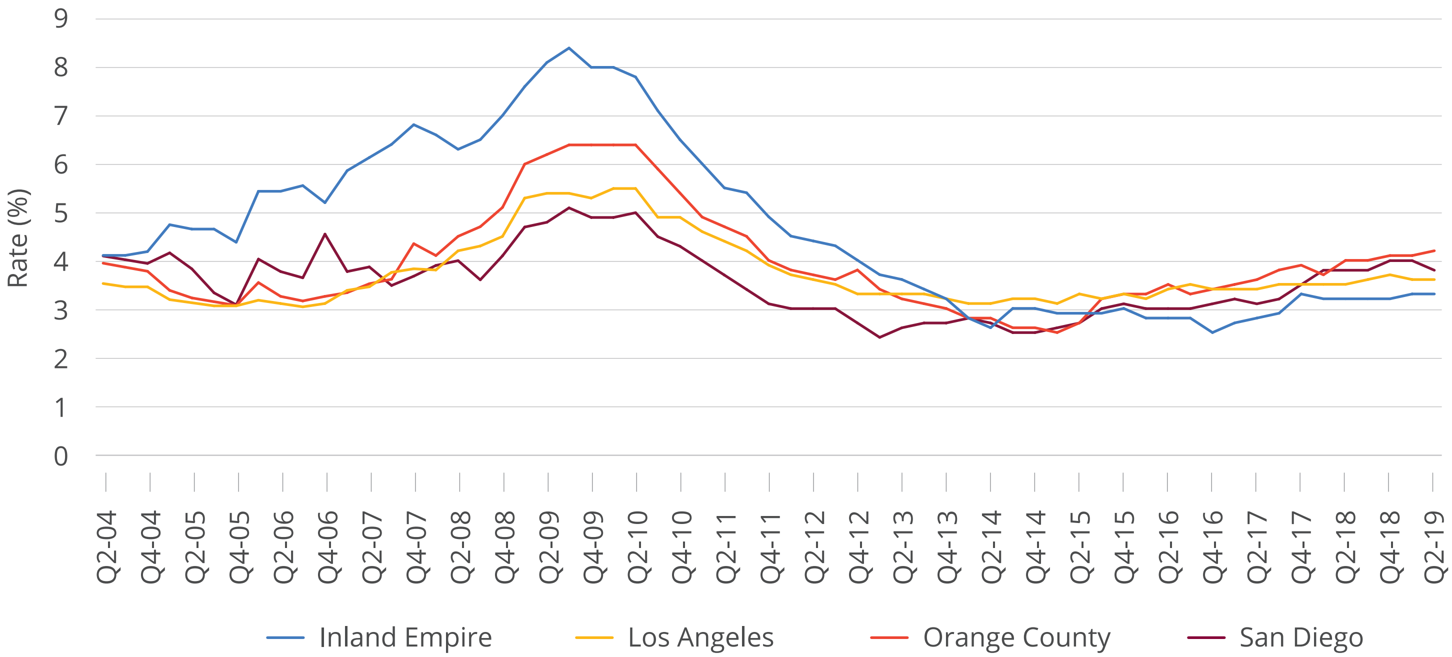
As of the second quarter of 2019, the average rent in the Inland Empire reached $1,390, an increase of 3.8 % from the second quarter of 2018. The vacancy rate for the Inland Empire rental market was 3.3% as of the second quarter of 2019, relatively unchanged in year-over-year terms.

The most expensive rental submarkets are those closest to Los Angeles County, including Ontario/Chino, Rancho Cucamonga, and Corona, with monthly rents of $1,720, $1,670 and $1,610 respectively.

The City of Upland had one of the lowest vacancy rates of any submarket at 2.1% in the second quarter of 2019, indicating high demand due to its close proximity to Los Angeles County. Rancho Cucamonga followed at 2.3%, significantly lower than the Inland Empire average.



MONTHLY RENT INLAND EMPIRE AND NEARBY REGIONS
Q2-04 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting



RENTAL VACANCY RATE INLAND EMPIRE AND NEARBY REGIONS
Q2-04 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting

Submarket	Cost of Rent	1-Year Growth Rent	Vacancy Rate	1-Year Change Vacancy Rate
Fontana/Rialto	1,186	3.1	1.8	-0.5
Upland	1,309	0.5	2.1	-0.2
Rancho Cucamonga	1,666	-0.2	2.3	-0.1
Indio/La Quinta/Coachella	1,128	4.1	2.5	-0.4
Palm Springs/Palm Desert	1,121	7.5	2.5	-0.6
San Bernardino	1,092	8.1	2.5	-0.1
Victorville	1,063	4.2	2.5	0.1
Colton/Loma Linda	1,451	3.2	2.7	-0.3
Hemet	1,186	4.6	3.0	-0.4
Total	1,393	3.8	3.3	0.1
Riverside County/Corona	1,610	5.4	3.4	-1.8
Riverside/North Magnolia	1,284	3.0	3.5	-0.2
North Ontario	1,484	1.6	3.6	-0.1
SW Riverside County	1,532	6.2	4.1	-0.7
University City/Moreno Valley	1,460	4.7	5.1	2.5
Perris	1,353	8.6	5.1	2.4
South Ontario/Chino	1,720	2.1	5.2	0.9

INLAND EMPIRE SUBMARKETS APARTMENT RENTS AND VACANCIES: Q2-2019
Source: Reis, Inc., Analysis by UCR Center for Forecasting

Construction and Development

Like much of the state, housing stock in the Inland Empire falls seriously short of demand. Given recent growth in the region's economy and its expanding population, the shortfall of new housing poses a potential threat to economic development.

During the first half of 2019, a total of 6,447 permits were issued in the Inland Empire (single and multifamily), 580 fewer than the first half of 2018, or an 8.2% decline. The sole reason for this is insufficient construction of single-family housing. In the first half of 2019, roughly 4,440 permits were issued – over 1,000 permits less than in the first two quarters of 2018. This issue is not unique to the Inland Empire. In Los Angeles, residential permits fell by 27.9%, San Diego's dropped a whopping 46.6%, and Orange County's slipped 6.9% between the first half of 2018 and the first half of 2019.

Permit activity in both Riverside and San Bernardino counties was also down during the first half of this year. Riverside County generally produces more residential permits than San Bernardino. However, in terms of year-over-year change, they were broadly similar during the past two quarters of 2019. Between the first half 2018 and the first half of 2019, single-family permits in Riverside County dropped 19.9%, slightly more than San Bernardino's 16.0% decline. Nonetheless, in terms of multifamily housing, both regions had strong performances during the first half of the year. San Bernardino County led the way with year-over-year growth of 35.1%, issuing almost 950 permits, while Riverside County's 2,210 multifamily permits were 33.4% higher than the first half of 2018.

While the push for more housing must be addressed, there are exciting residential projects in development throughout the Inland Empire. Rancho Cucamonga has several housing units coming online to bolster both rental and sale markets. One multifamily project includes 180 mixed use units scheduled for completion in the Fall of 2019[4], while 135 new homes are on track to be built near the Metrolink station[5].

Construction & Development: **Key Points**

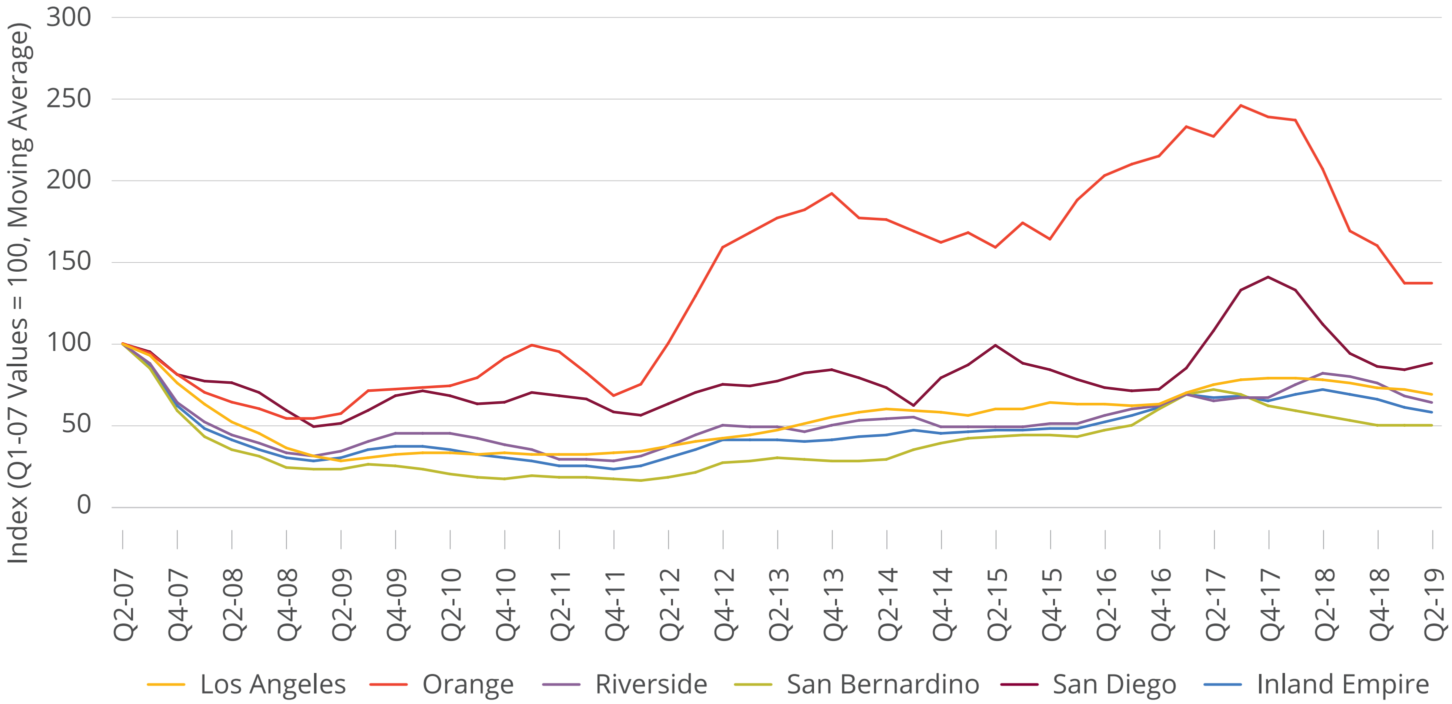
Overall, the Inland Empire issued 2,100 multifamily permits and 4,440 single-family permits during the first half of 2019, a change of 34.2% and -18.7% respectively.

The Inland Empire issued the second highest number of permits in Southern California at 6,447, outstripping San Diego (3,473) and Orange County (3,898), but falling slightly short of Los Angeles (9,813).

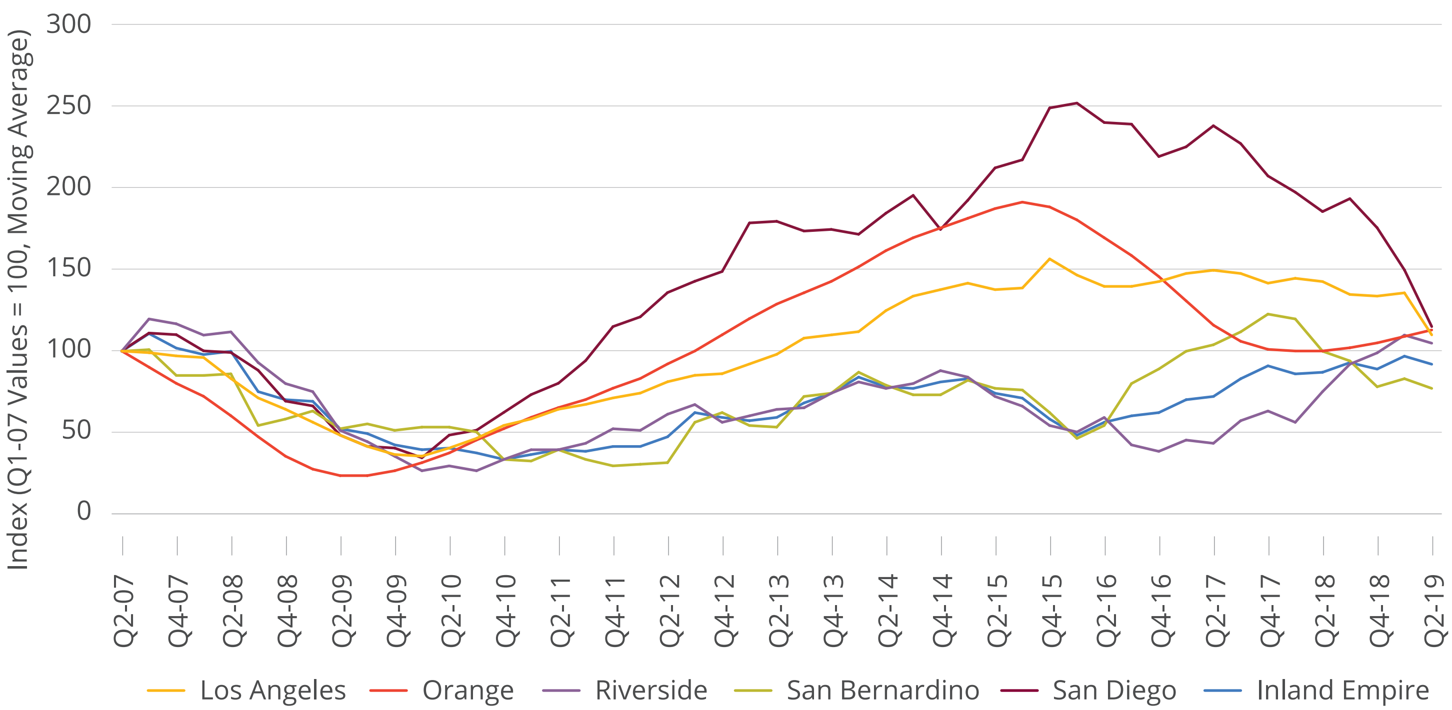
The Inland Empire dominated multifamily permit growth in Southern California during the first half of 2019. At 34.2% year-over-year growth, the Inland Empire was far ahead of Orange County (13.3%), Los Angeles (-12.4%), and San Diego (-29.4%).

[4] Smith, Kevin. 'Fore Unveils Apartment Communities in Rancho Cucamonga, Camarillo.' Press Enterprise. Press Enterprise, August 27, 2019. https://www.pe.com/2019/08/27/fore-unveils-apartment-communities-in-rancho-cucamonga-camarillo/.

[5] Lansner, Jonathan. '135 New Homes Coming to Rancho Cucamonga with Starting Prices under $400,000.' Daily Bulletin. Daily Bulletin, July 3, 2019. https://www.dailybulletin.com/2019/06/28/135-new-homes-coming-to-rancho-cucamonga-with-starting-prices-under-400000/.



SINGLE-FAMILY PERMITS ISSUED (INDEXED AT 100) CALIFORNIA AND SELECTED COUNTIES
Q2-07 TO Q2-19
Source: Construction Industry Research Board, Analysis By UCR Center for Forecasting



MULTIFAMILY PERMITS ISSUED (INDEXED AT 100) CALIFORNIA AND SELECTED COUNTIES
Q2-07 TO Q2-19
Source: Construction Industry Research Board, Analysis By UCR Center for Forecasting

County	Multifamily Permits (2019 Year-to-Date)	1-Year % Growth	Single-family Permits (2019 Year-to-Date)	1-Year % Growth
Inland Empire	1,973	20	4,829	-18
Los Angeles	7,334	-33	2,771	-13
Orange	2,777	33	1,529	-34
Riverside	1,179	48	3,175	-20
San Bernardino	794	-7	1,654	-15

RESIDENTIAL PERMITS BY COUNTY: YTD Q2-2019
Source: Construction Industry Research Board, Analysis by UCR Center for Forecasting

Region	Single-family Permits (2019 YTD)	1-Year % Growth
Southwest Region	1,877	-25.4
Northwest Region	1,054	-24.6
Southeast Region	435	-17.5
Mojave Desert Region	386	20.6
Northeast Region	113	-39.6

RIVERSIDE-SAN BERNARDINO SINGLE-FAMILY PERMITS BY REGION: YTD Q2-2019
Source: Construction Industry Research Board, Analysis by UCR Center for Forecasting

Region	Multifamily Permits (2019 YTD)	1-Year % Growth
Southwest Region	995	56.7
Northwest Region	768	26.7
Southeast Region	183	56.4
Mojave Desert Region	22	-82.3
Northeast Region	2	-98.3

RIVERSIDE-SAN BERNARDINO MULTIFAMILY PERMITS BY REGION: YTD Q2-2019
Source: Construction Industry Research Board, Analysis by UCR Center for Forecasting

Inland Empire **Commercial Real Estate**

Over the last year, the performance of the Inland Empire's commercial real estate market has been mixed. Office and retail vacancy rates have more or less stabilized, but are higher than nearby metro areas. As expected, demand for warehouse and industrial space was stronger than for office and retail space, reflecting the region's core strength in logistics-related services. However, after years of downward trending vacancy rates in warehouse and industrial space, the last two years have seen a slight uptick. Permit valuations trends vary across the commercial sectors, with stagnant activity in retail and rising activity in office and warehouse/industrial.

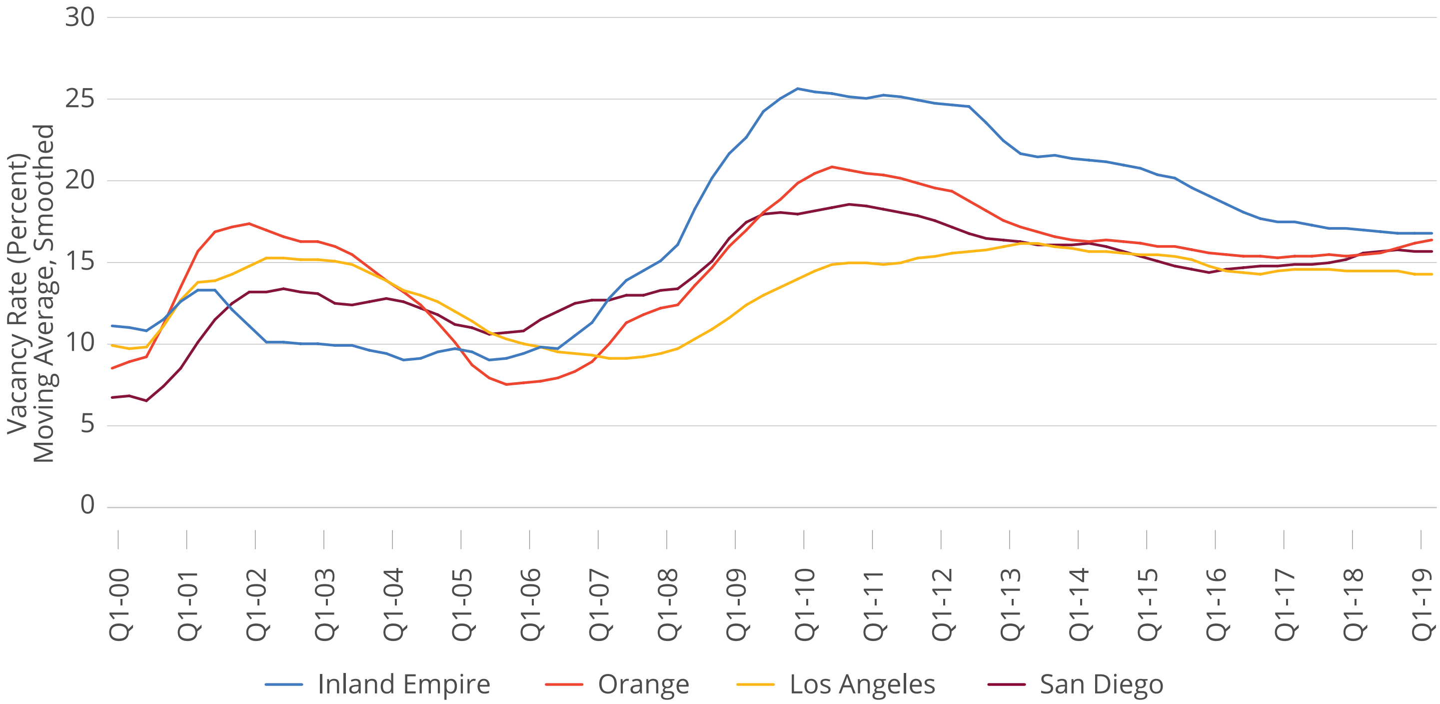
Office

Demand for office space in the Inland Empire was mostly stable throughout 2018 and the first half of 2019.

- Vacancy rates in the Corona/Riverside/Moreno Valley (12.0%) and Temecula/Murrieta submarkets (12.2%) were the lowest in the Inland Empire.

- Office vacancy rates in the Colton/Redlands/San Bernardino submarket (24.0%) are notably higher than all other Inland Empire submarkets. Furthermore, the submarket's vacancy rate has inched up gradually in recent quarters, driven entirely by a decline in occupied stock.

- Based on price, the Rancho Cucamonga/Ontario/Fontana submarket appears to be the most active for office-based employment, at $24.43 per square foot per year for renting. Colton/Redlands/San Bernardino has the lowest average office rent at $21.11 per square foot per year.



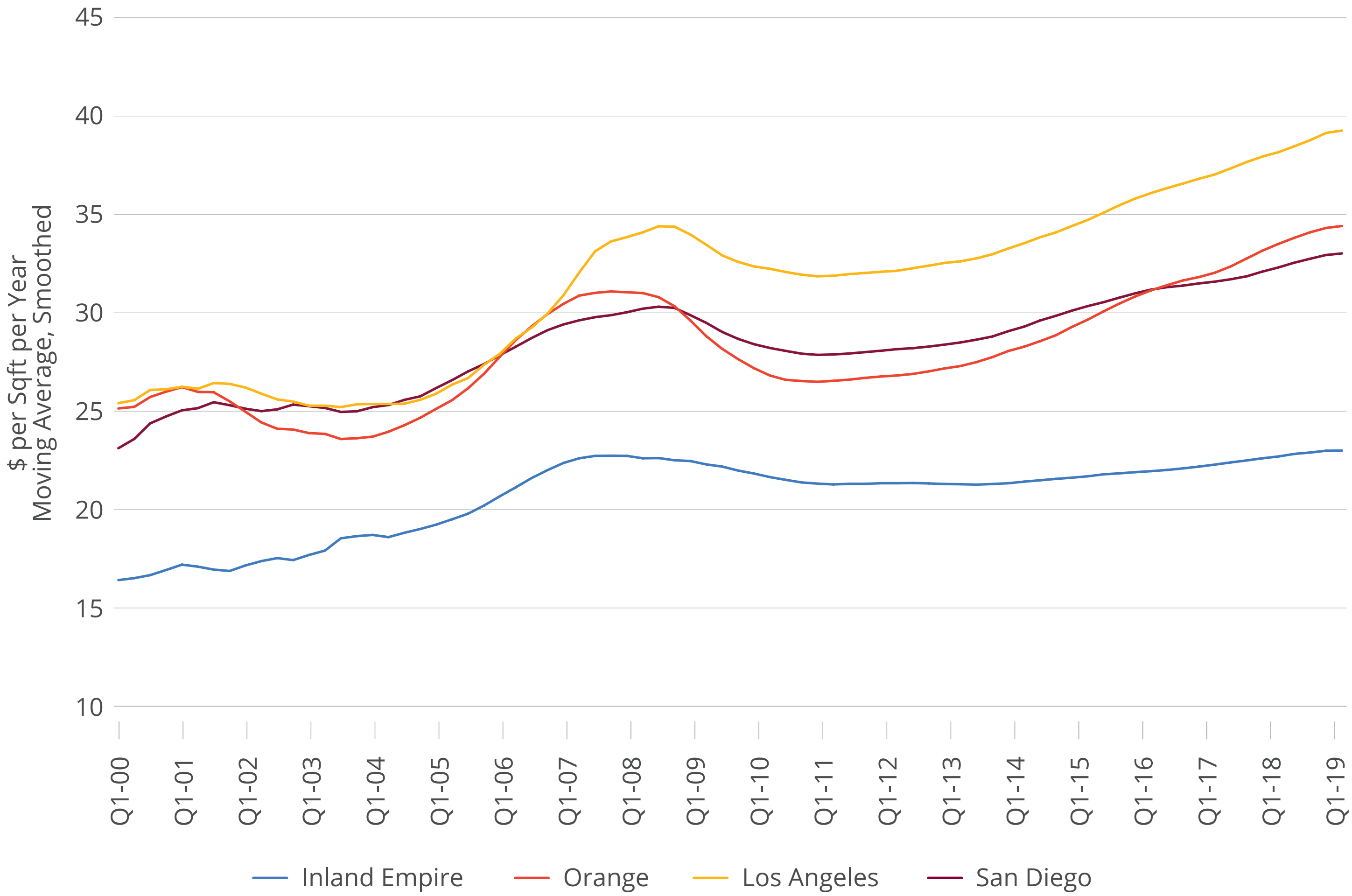
OFFICE VACANCY RATES
Q1-00 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting

In comparison, vacancy rates were noticeably lower in Los Angeles County and San Diego County, and slightly lower in Orange County. Additionally, office rents grew much faster in these regions. In contrast to the Inland Empire, these regions have a number of highly concentrated job centers, with office-based industries and employment comprising a larger share of their economies.

- The office vacancy rate averaged 16.8% in the second quarter of 2019, a 0.3 percentage point decrease from the same quarter a year earlier. Average office vacancy rates in Los Angeles County, San Diego County, and Orange County were 14.3%, 15.7% and 16.4%, respectively.

- The average office rent in the Inland Empire as a whole was $22.97 per square foot per year in the second quarter of 2019, 1.3% higher than the same quarter in 2018. The average office rent grew 2.9%, 2.2% and 2.7% respectively in Los Angeles County, San Diego County, and Orange County.

- The Inland Empire's office rent growth has been mild at best since the Great Recession. From the second quarter of 2009 to the second quarter of 2019, its compounded average growth rate was 0.6%, substantially lower than Los Angeles County (3.2%), San Diego County (2.3%), and Orange County (3.2%).



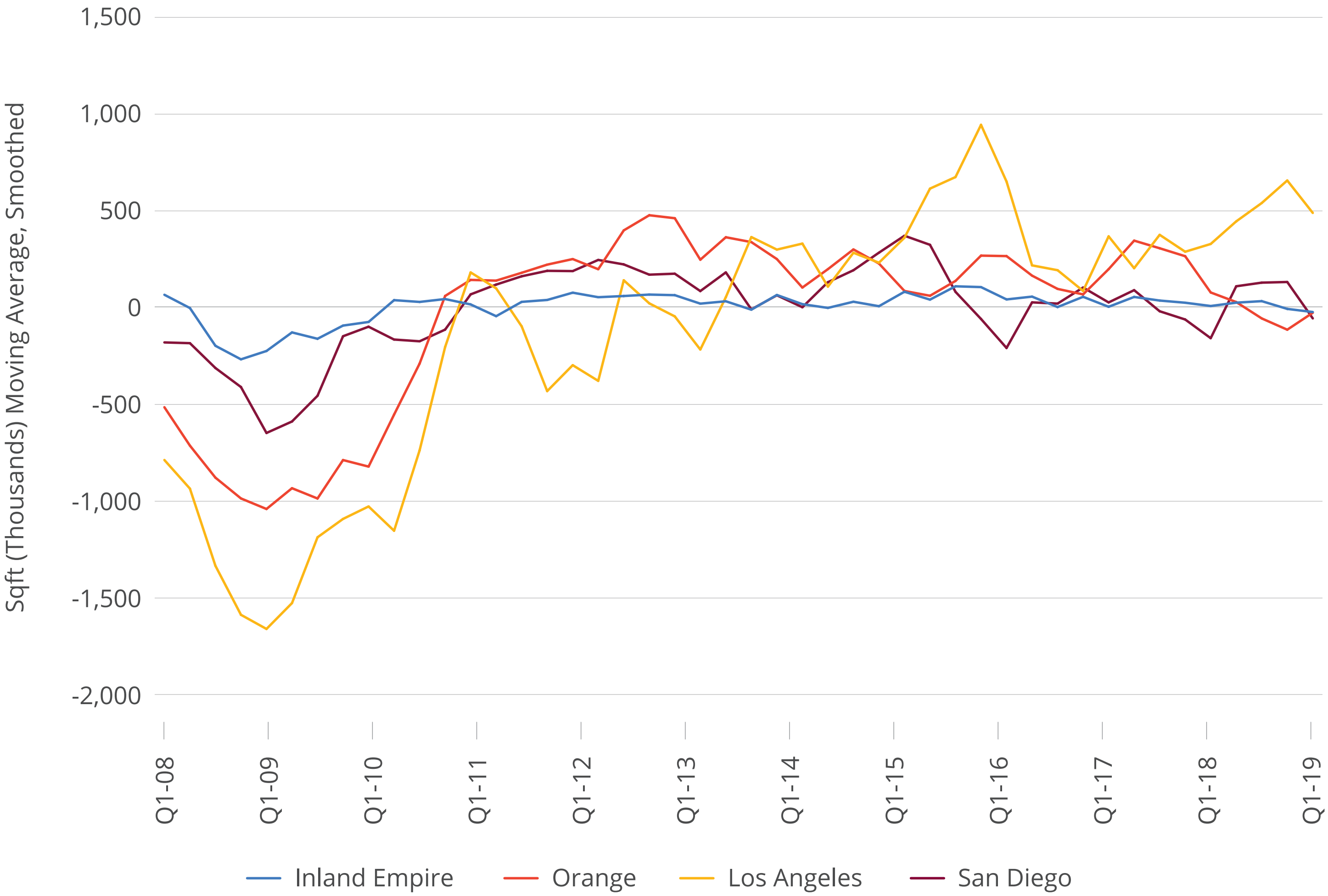
OFFICE COST OF RENT
Q1-00 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting

Submarket	Q2-18	Q2-19	YOY Change (%)
Chino/Montclair/Upland	22.55	22.68	0.58
Colton/Redlands/San Bernardino	20.81	21.11	1.44
Corona/Riverside/Moreno Valley	23.61	23.89	1.19
Palm Springs/Palm Desert	22.26	22.04	-0.99
Rancho Cucamonga/Ontario/Fontana	23.71	24.43	3.04
Temecula Valley/Murrieta	23.3	23.76	1.97

INLAND EMPIRE OFFICE PROPERTY SUBMARKETS – RENT ($/SQ. FT.)
Source: Reis, Inc., Analysis by UCR Center for Forecasting

Submarket	Q2-18	Q2-19	YOY Change (%)
Chino/Montclair/Upland	17.4	13.0	-4.40
Colton/Redlands/San Bernardino	23.2	24.0	0.80
Corona/Riverside/Moreno Valley	11.4	12.0	0.60
Palm Springs/Palm Desert	17.6	17.7	0.10
Rancho Cucamonga/Ontario/Fontana	17.7	17.2	-0.50
Temecula Valley/Murrieta	13.3	12.2	-1.10

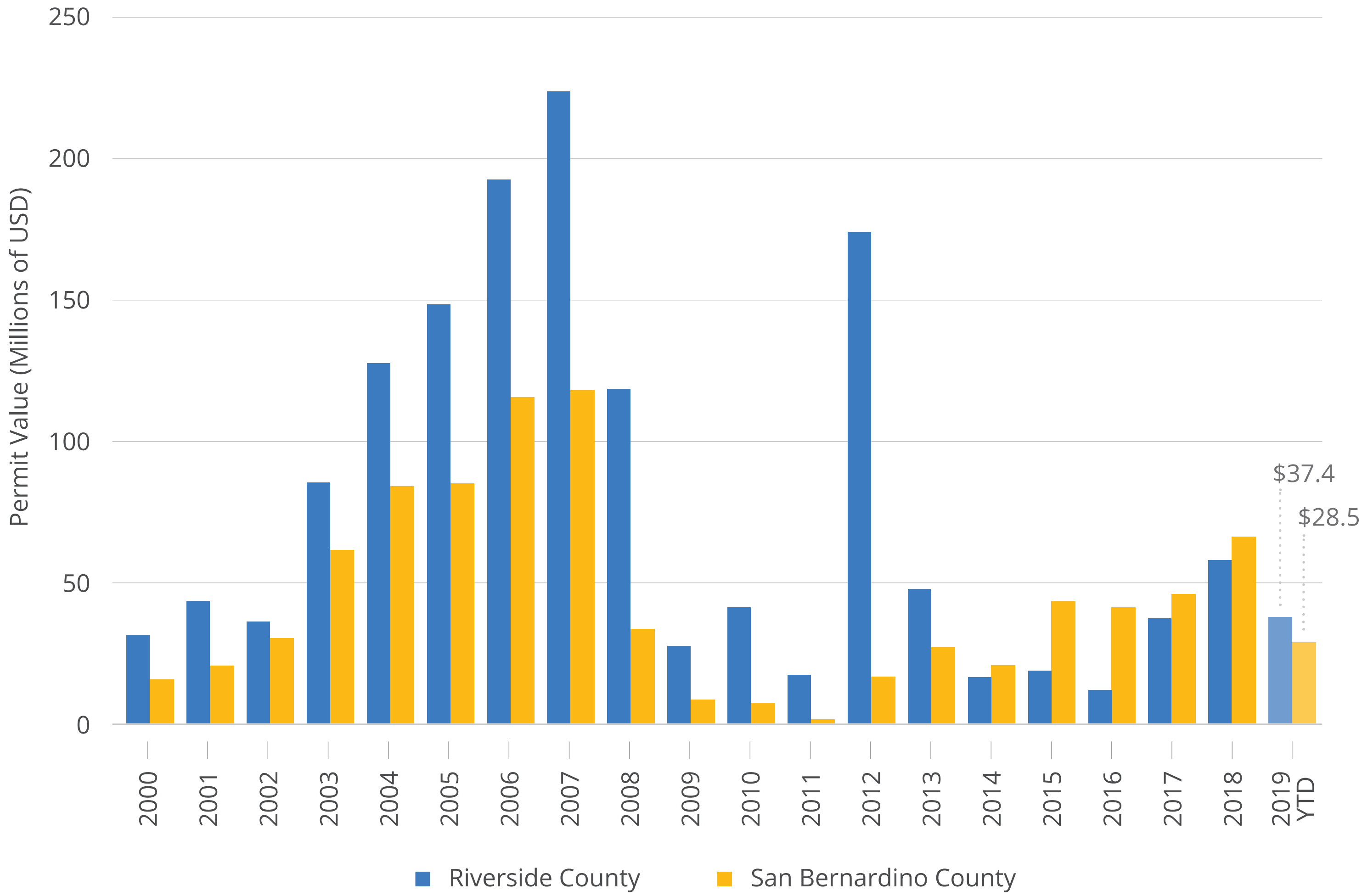
INLAND EMPIRE OFFICE PROPERTY SUBMARKETS – VACANCY RATES (%)
Source: Reis, Inc., Analysis by UCR Center for Forecasting



OFFICE NET ABSORPTION
Q1-08 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting

Inland Empire office space net absorption (the net change in occupied space during the quarter) remains unimpressive. Lackluster, and sometimes negative, absorption rates have typified the Inland Empire office market in recent years.

- In the second quarter of 2019, office net absorption in the Inland Empire totaled negative 78,000 (an overall decrease in occupied space).
- Except for the Chino/Montclair/Upland and Temecula Valley/Murrieta submarkets, occupied stock for office space decreased (negative net absorption) compared to a year ago.
- With no new office stock coming online in 2019 (according to data gathered by Reis Inc.), absorption rates should remain close to flat for the time being.



OFFICE PERMIT VALUES ANNUAL
2000 TO 2019 YTD (2019 IS YEAR-TO-DATE THROUGH Q2)
Source: Construction Industry Research Board, Analysis By UCR Center for Forecasting

Office permit values in the Inland Empire are far below pre-recession totals. However, with office permit values posting recent gains, especially in Riverside County, new developments are expected in the next few years.

- $57.7 million in office permits were issued in Riverside County in 2018, a 56% increase in value over 2017.
- San Bernardino County's permit values rose roughly 45% during this period, reaching $66.0 million in 2017.
-

Office permit activity in these two counties differed considerably compared to ten years ago. San Bernardino County's office permit valuation in 2018 was almost double the 2008 figure of $33.2 million. In comparison, Riverside County's office permit valuation in 2018 was slightly less than half of 2008's $118.3 million.

County	2014	2015	2016	2017	2018	YTY Change (%), 2017-2018	2018 YTD	2019 YTD	YTD Change (%), 2018 YTD-2019 YTD
Riverside	16.2	18.5	11.7	37.0	57.7	55.8	29.2	37.4	28.1
San Bernardino	20.5	43.2	40.9	45.7	66.0	44.6	55.2	28.5	-48.4
Los Angeles	266.6	347.0	345.3	497.6	434.7	-12.6	271.4	104.5	-61.5
Orange	72.3	21.9	254.3	81.2	257.6	217.1	252.1	22.0	-91.3
San Diego	249.3	84.4	51.3	42.1	93.1	121.2	38.4	99.1	158.2

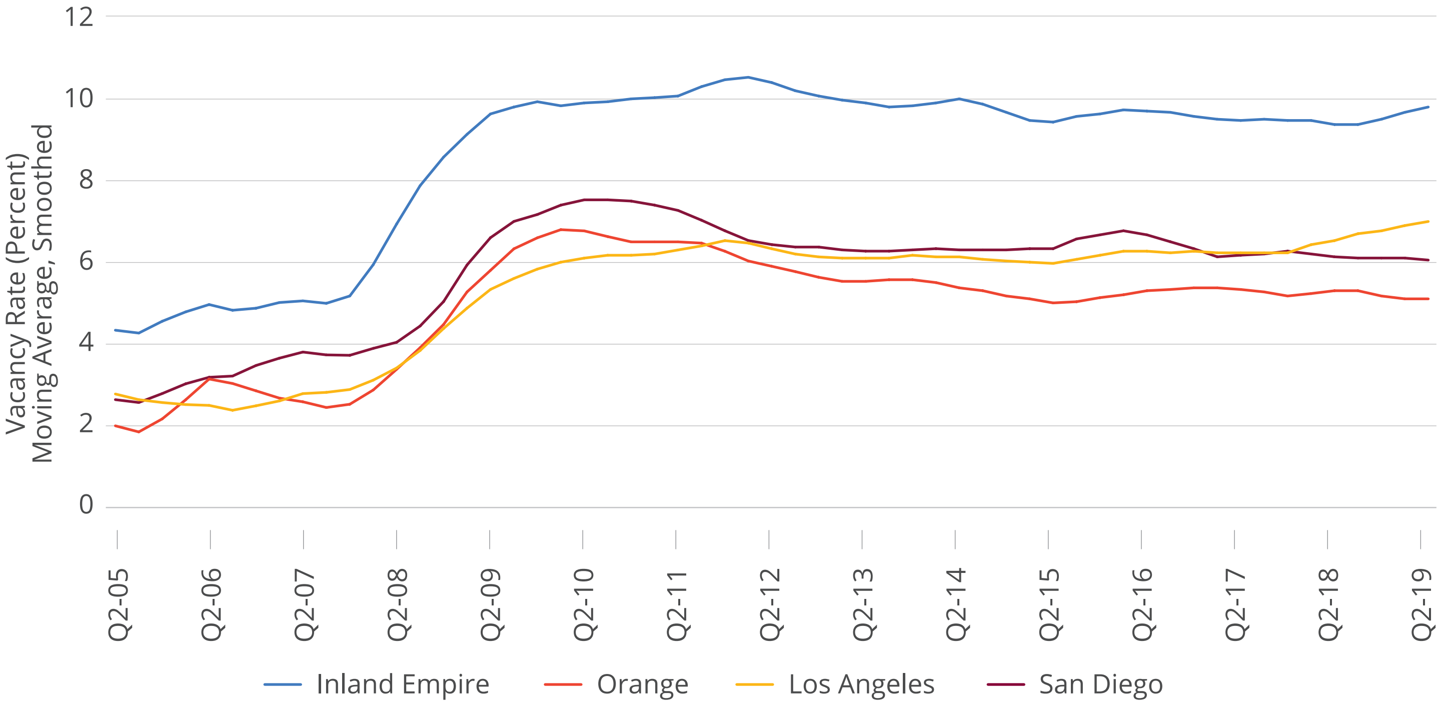
Note: YTD values are through Q2

OFFICE PERMITS ($ MILLIONS) – REGIONAL COMPARISON
Source: Construction Industry Research Board, Analysis by UCR Center for Forecasting

Retail

The Inland Empire retail sector fared similarly to its office sector. Although the average retail vacancy rate generally fell from the second quarter of 2012 to the second quarter of 2018, there has been a small upswing since then. Moreover, retail vacancy rates in the Inland Empire, as well as in nearby metro areas, have failed to return to pre-recession levels.

- In the second quarter of 2019, retail vacancy rates in the Inland Empire averaged 9.8%, up 43 basis points from the same quarter in 2018.
- The recent uptick is driven by an overall increase in vacancy rates for community shopping centers with gross leasable areas ranging from 100,000 square feet to 350,000 square feet.
- Retail vacancy rates for community shopping centers increased from the second quarter of 2018 to the second quarter of 2019 in all submarkets except Rancho Cucamonga/Chino and Victorville.
- Neighborhood shopping centers (considerably smaller than community shopping centers, with gross leasable areas ranging from 10,000 square feet to 150,000 square feet), saw vacancy rates decrease in four out of six submarkets during the same period.
- Overall retail vacancy rates (community plus neighborhood shopping centers) declined 1.1% in the Rancho Cucamonga/Chino and Victorville submarkets, but went up in all of the other four submarkets.



RETAIL VACANCY RATES
Q2-05 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting

The region's retail industry posted strong rent growths until the first half of 2018. However, since the third quarter of 2018, year-over-year rent growth has lagged behind Los Angeles County and San Diego County.

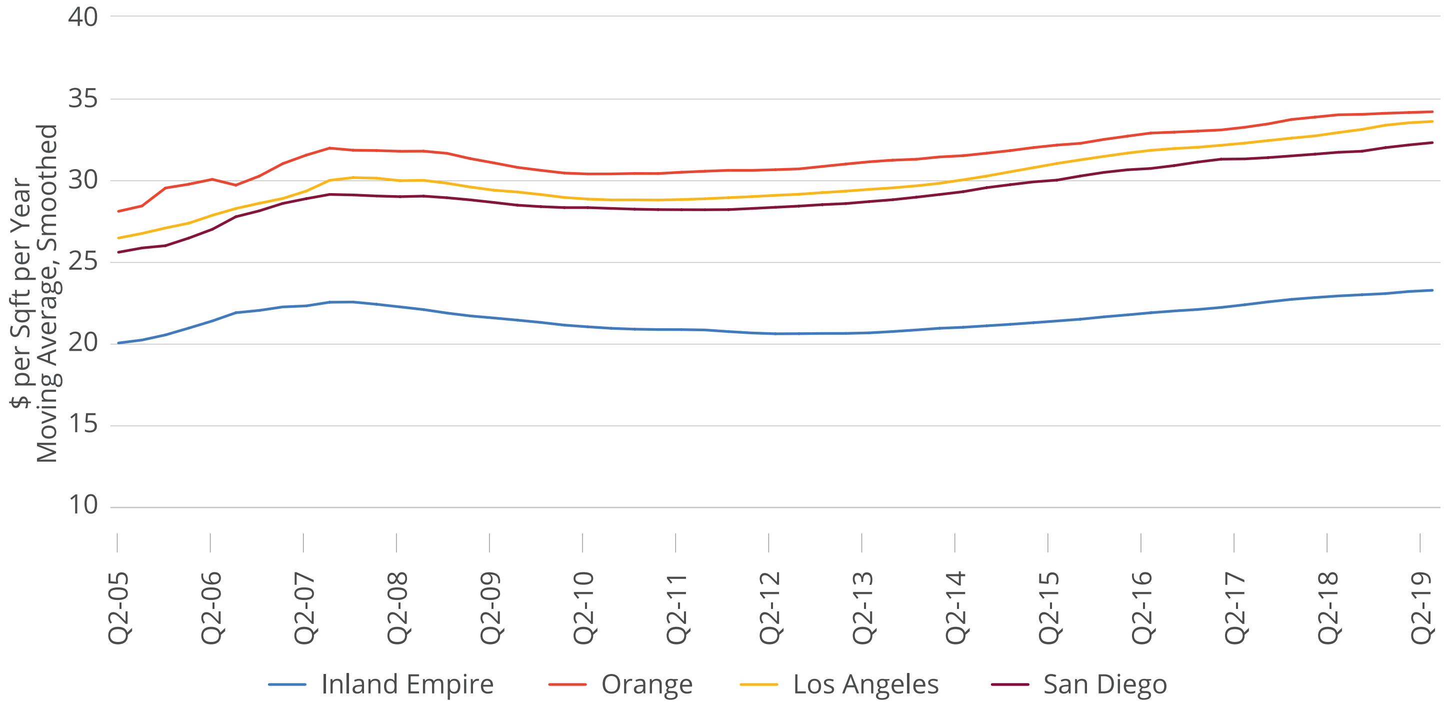
- From the second quarter of 2018 to the second quarter of 2019, average retail rents in the Inland Empire grew just 1.5% to $23.25 per square foot, roughly $10 lower than nearby metro areas.

- Average retail rent growth in Los Angeles County (+2.1%) and San Diego County (+1.9%) surpassed that of the Inland Empire.

- Average retail rent in Orange County grew 0.5%.

- The Colton/Redlands/San Bernardino submarket continues to lead with the largest rent increase over the past year, growing 5.8% from the second quarter of 2017 to the second quarter of 2018.

- Three out of six submarkets (Moreno Valley/Riverside/Corona, Palm Desert, and Victorville) experienced anemic rent growths at 0.58%, 0.42% and 0.38%, respectively.



RETAIL COST OF RENT
Q2-05 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting

According to Reis Inc., about 397,000 square feet of retail space (320,000 square feet for community shopping centers and 77,000 square feet for neighborhood shopping centers) have come online in the Inland Empire since the second half of 2018. More space should be developed over the next few years, however, retail permit values have declined in Riverside County but surged in San Bernardino County.

- $308.9 million in retail permits were issued in Riverside County in 2018, a 25% decrease compared to 2017. However, just $91 million in retail permit values were issued in the first half of 2019, a 45% decline compared to the first half of 2018.

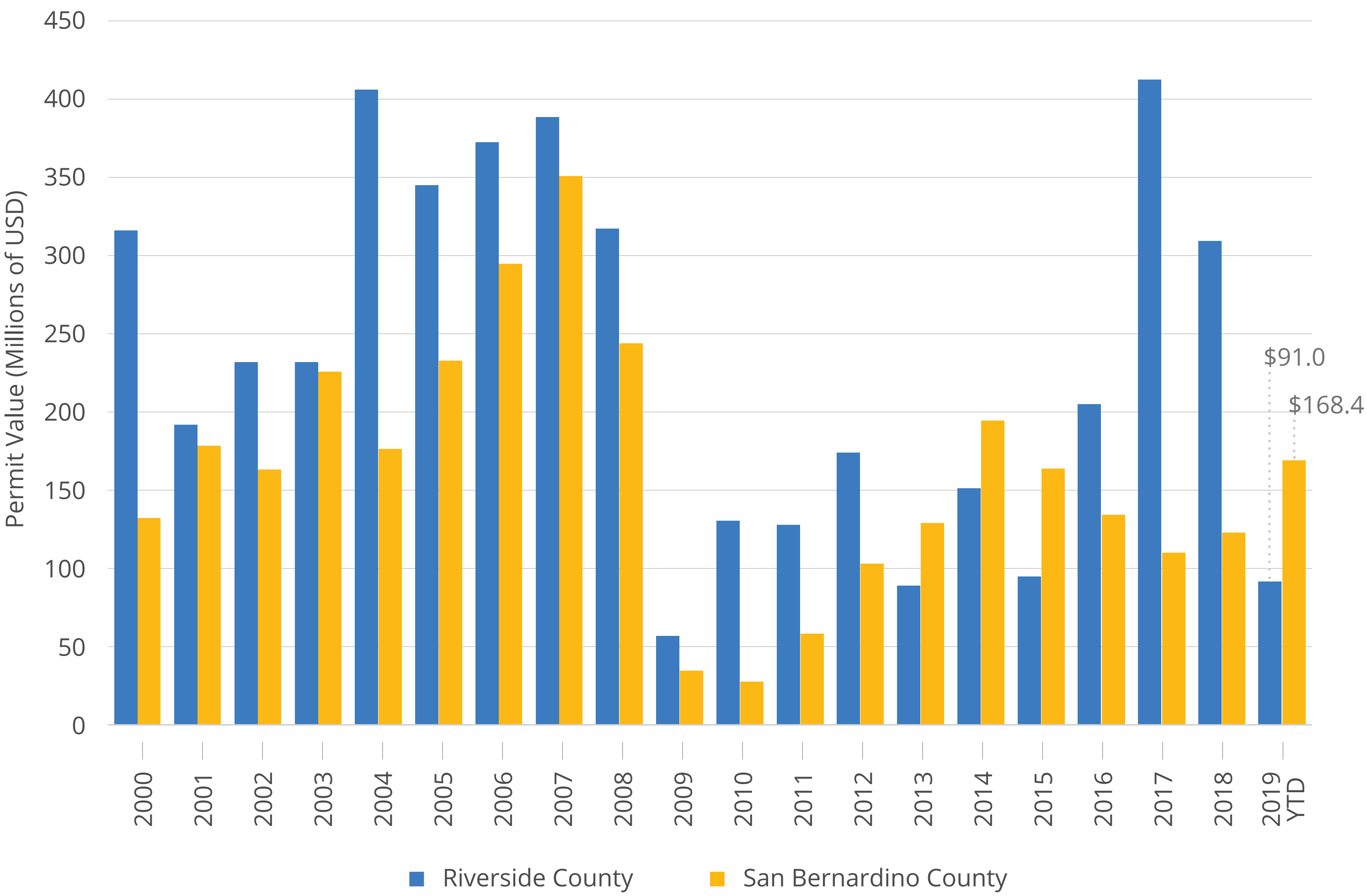
- San Bernardino County's retail permit values increased 12% from $109.2 million in 2017 to $122.1 million in 2018, reversing a downward trend that began in 2015. Retail permit value totaled $168.4 million in the first half of 2019, already surpassing 2018's total retail permit value.

Submarket	Q2-18	Q2-19	YOY Change (%)
Colton/Redlands/San Bernardino	20.08	21.24	5.78
Moreno Valley/Riverside/Corona	22.36	22.49	0.58
Palm Desert	25.95	26.06	0.42
Rancho Cucamonga/Chino	25.34	25.91	2.25
South Riverside County	23.6	23.85	1.06
Victorville	18.22	18.29	0.38

INLAND EMPIRE RETAIL PROPERTY SUBMARKETS – RENT ($/SQ. FT.)
Source: Reis, Inc., Analysis by UCR Center for Forecasting

Submarket	Q2-18	Q2-19	YOY Change (%)
Colton/Redlands/San Bernardino	9.8	11.0	1.20
Moreno Valley/Riverside/Corona	6.8	7.7	0.90
Palm Desert	13	13.8	0.80
Rancho Cucamonga/Chino	10.6	9.5	-1.10
South Riverside County	7.9	9	1.10
Victorville	8.1	7	-1.10

INLAND EMPIRE RETAIL PROPERTY SUBMARKETS – VACANCY RATES (%)
Source: Reis, Inc., Analysis by UCR Center for Forecasting



RETAIL PERMIT VALUES ANNUAL (2019 IS YEAR-TO-DATE THROUGH Q2)
2000 TO 2019 YTD (2019 IS YEAR-TO-DATE THROUGH Q2)
Source: Construction Industry Research Board, Analysis By UCR Center for Forecasting

County	2014	2015	2016	2017	2018	YTY Change (%), 2017-2018	2018 YTD	2019 YTD	YTD Change (%), 2018 YTD-2019 YTD
Riverside	150.5	94.3	204.6	412.3	308.9	-25.1	165.9	91.0	-45.1
San Bernardino	193.9	163.2	133.6	109.2	122.1	11.8	31.3	168.4	438.0
Los Angeles	731.8	471.7	541.4	688.1	762.3	10.8	307.2	258.0	-16.0
Orange	367.3	105.0	268.2	213.8	194.9	-8.8	108.6	92.3	-15.0
San Diego	201.4	194.1	121.3	229.6	201.9	-12.1	146.9	65.9	-55.1

Note: YTD values are through Q2

OFFICE PERMITS ($ MILLIONS) – REGIONAL COMPARISON
Source: Construction Industry Research Board, Analysis by UCR Center for Forecasting

Warehouse & Industrial

Of all the Inland Empire's commercial property types, the warehouse and industrial market continues to deliver the strongest performance – no surprise given the region serves as a logistics powerhouse for Southern California. Yet, similar to the retail market, vacancy rates have increased recently. With the exception of Los Angeles County, where vacancy rates inched downward, the uptick also holds true for nearby metro areas. Unlike retail, however, the uptick is due to warehousing stock being added at a tremendous pace as demand continues to rise.

- Warehouse vacancy rates in the Inland Empire averaged 8.3% in the second quarter of 2019, almost the same as the first quarter of 2016.
- At the submarket level, those closer to the Los Angeles area tend to have lower vacancy rates. Montclair, Ontario, and Corona had the lowest vacancy rates in the period, at 4.5%, 4.8% and 5.2%, respectively. Vacancy rates in these three submarkets had either decreased or were unchanged from the same quarter a year earlier.
- Submarkets furthest from the coast have some of the highest vacancy rates. In the second quarter of 2019, Perris/Moreno Valley (16.3%), Temecula (15.8%), and Victorville (14.2%) had the highest vacancy rates.

The Inland Empire's expanding logistics sector is driving demand for warehouse and distribution space. Despite recent increases in new stock, and a resulting rise in the vacancy rate, cost of rents increased 3.8% year-to-year in the second quarter of 2019. Large scale development projects such as Transwestern Development Co.'s (TDC) Eastvale construction site help bolster the Inland Empire's stock. Once completed, the industrial site will have over 337,850 feet of Class A warehouse space[6].

It is important to note, however, that although the Inland Empire has less expensive warehouse space, that's not always enough to entice businesses to move in. Indeed, many major producers continue to set up shop in other, denser metro areas for the agglomeration effects[7]. If and when the Inland Empire becomes denser, the value of its warehouse space will increase, and prices should continue to rise.

- Warehouse rents reached $5.69 per square foot in the second quarter of 2019. The 3.8% increase outpaces rent growth in Los Angeles County (+2.5%), Orange County (+2.1%), and San Diego County (2.7%).

- Rents in nearby metros are far higher, ranging from $7.54 per square foot in Orange County to $8.94 per square foot in San Diego County.

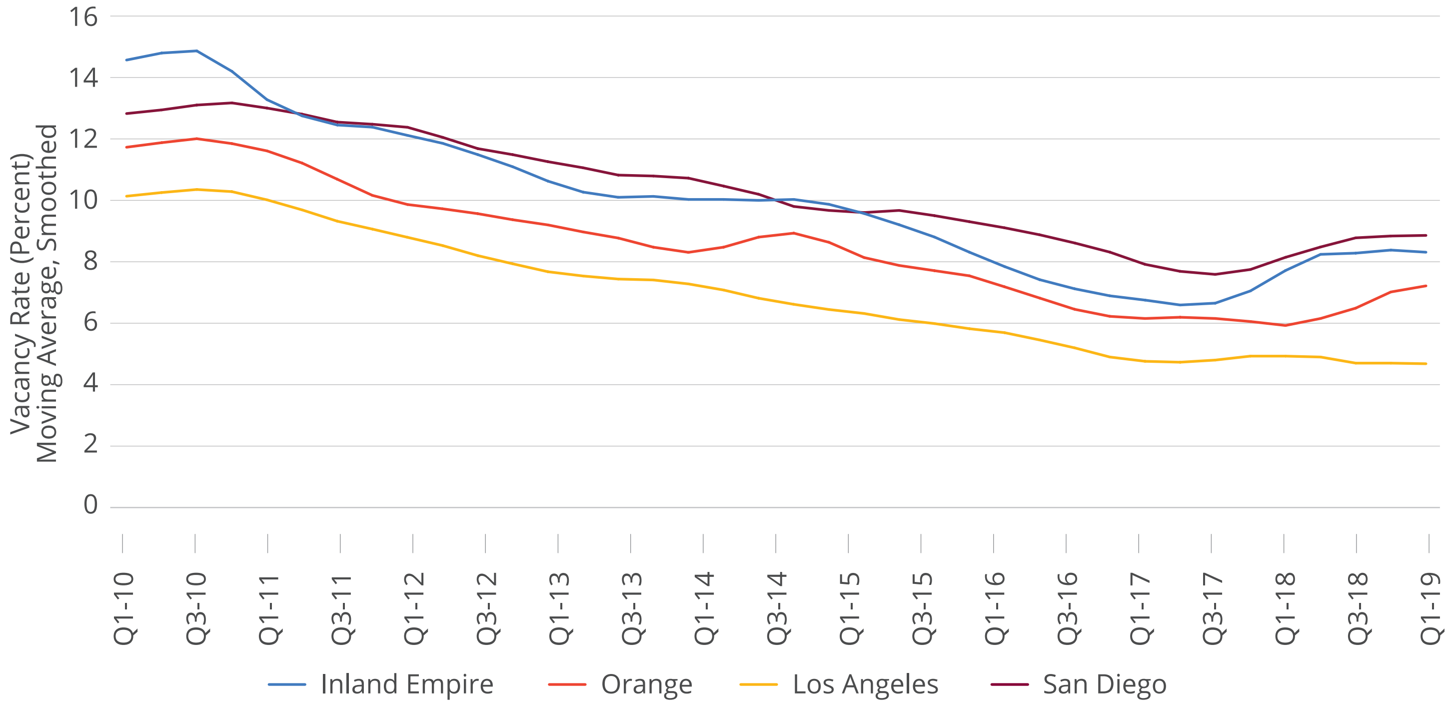
- At $6.58 per square foot, the Chino submarket had the highest rent for warehouse space in the second quarter of 2019.

- The Corona, Perris/Moreno Valley, and Temecula submarkets were close behind, all with average rents above $6.00 per square foot.

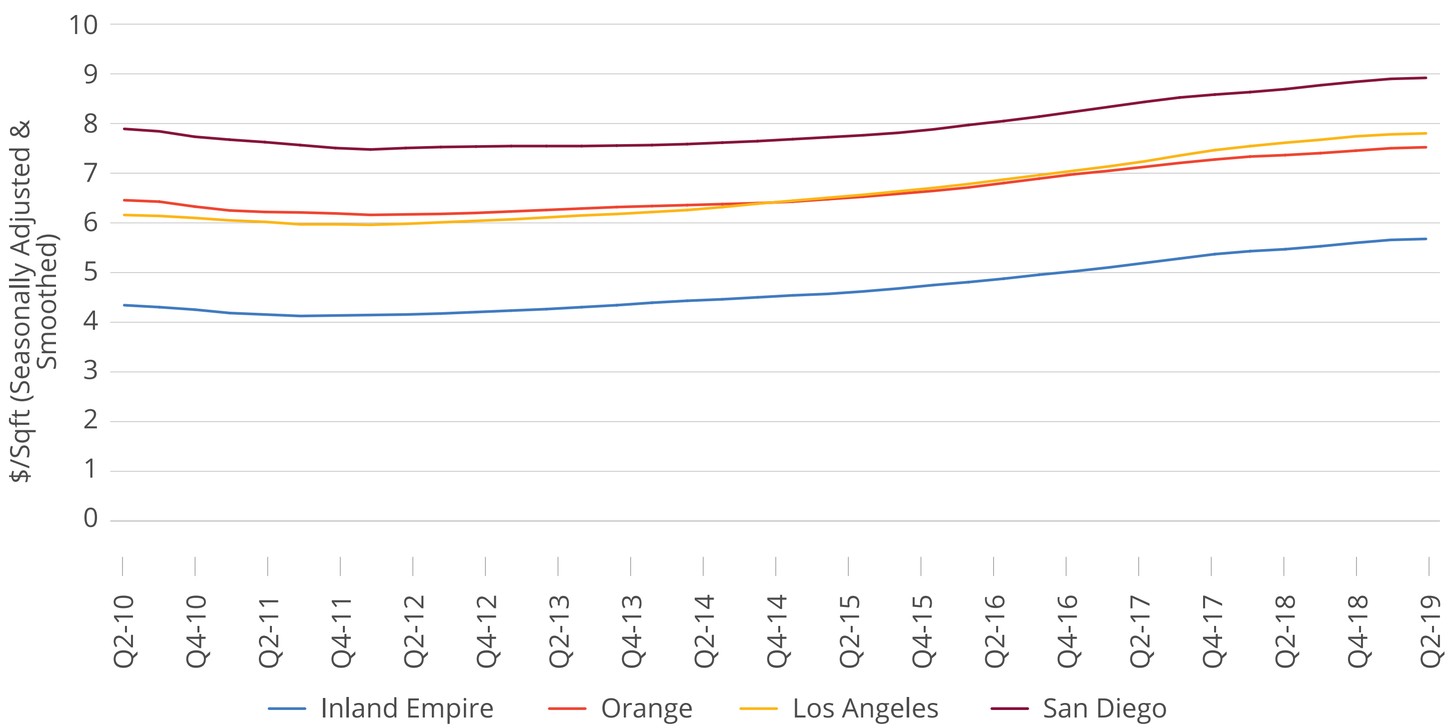
- Victorville was the only submarket with average rents below $5.00 per square foot.

[6] Transwestern Development Company. "TRANSWESTERN DEVELOPMENT CO. TO BUILD A 337,000 SF INDUSTRIAL PROPERTY IN INLAND EMPIRE." GlobeNewswire News Room. "GlobeNewswire", August 26, 2019. https://www.globenewswire.com/news-release/2019/08/26/1906606/0/en/transwestern-development-co-to-build-a-337-000-sf-industrial-property-in-inland-empire.html.

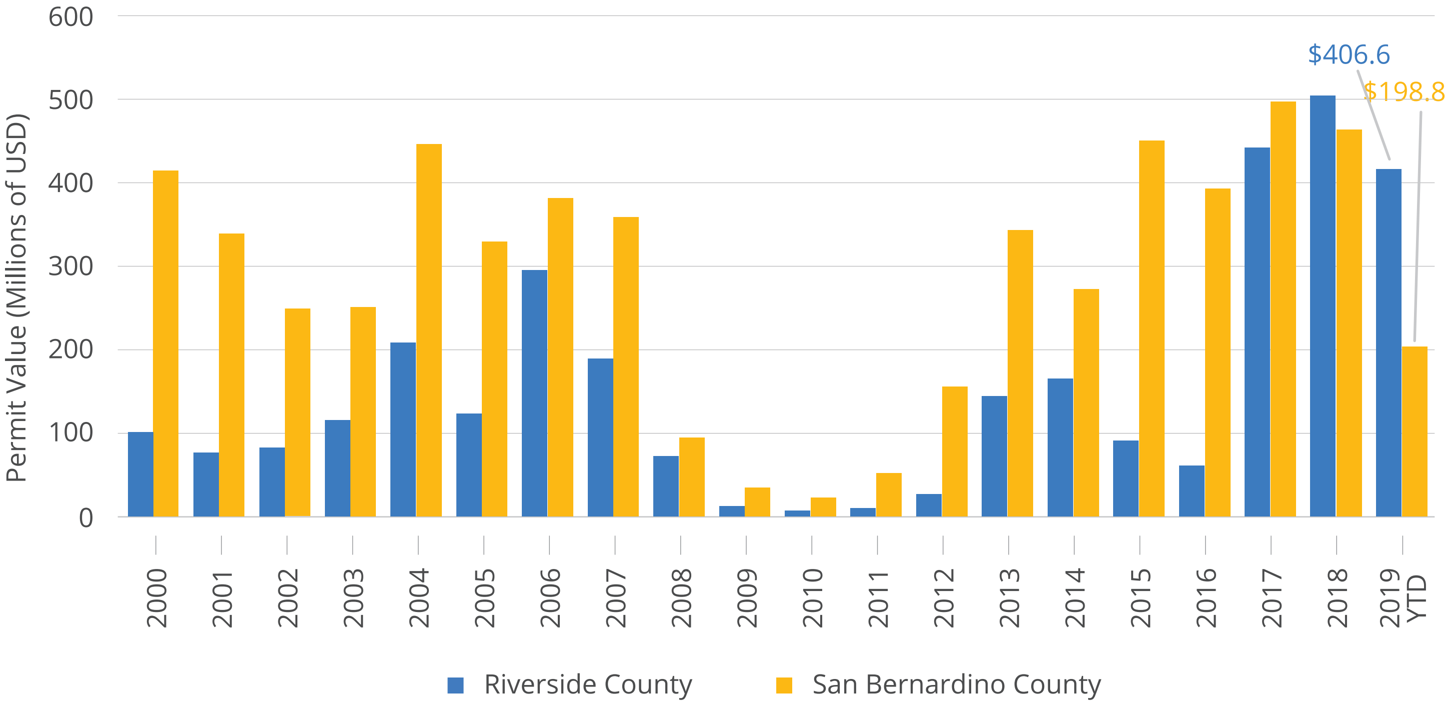
[7] Agglomeration entails the cost benefits that a society enjoys when firms and industries are in proximity. The advantages a producer gains from a downtown metro location may outweigh the cheaper warehouse space in the Inland Empire.



WAREHOUSE VACANCY RATES
Q1-10 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting



WAREHOUSE COST OF RENT
Q2-10 TO Q2-19
Source: Reis, Inc., Analysis By UCR Center for Forecasting



INDUSTRIAL PERMIT VALUES ANNUAL (2019 IS YEAR-TO-DATE THROUGH Q2)
2000 TO 2019 YTD
Source: Construction Industry Research Board, Analysis By UCR Center for Forecasting

Submarket	Q2-18	Q2-19	YOY Change (%)
Chino	6.50	6.58	1.2
Corona	5.93	6.21	4.7
Fontana	5.60	5.75	2.7
Montclair	5.57	5.68	2.0
Ontario	5.52	5.79	4.9
Palm Springs	5.24	5.28	0.8
Perris/Moreno Valley	5.78	6.2	7.3
Rancho Cucamonga	5.53	5.67	2.5
San Bernardino/Redlands/Yucaipa	5.11	5.39	5.5
Temecula	5.93	6.02	1.5
Victorville	4.37	4.54	3.9

INLAND EMPIRE WAREHOUSE PROPERTY SUBMARKETS – RENT ($/SQ. FT.)
Source: Reis, Inc., Analysis by UCR Center for Forecasting

Submarket	Q2-18	Q2-19	YOY Change (%)
Chino	10.4	10.3	-0.1
Corona	6.9	5.2	-1.7
Fontana	9.9	10.1	0.2
Montclair	4.8	4.5	-0.3
Ontario	4.8	4.8	0.0
Palm Springs	10.6	10.1	-0.5
Perris/Moreno Valley	13.2	16.3	3.1
Rancho Cucamonga	4.9	8.7	3.8
San Bernardino/Redlands/Yucaipa	7.5	8.4	0.9
Temecula	19.9	15.8	-4.1
Victorville	16.1	14.2	-1.9

INLAND EMPIRE WAREHOUSE PROPERTY SUBMARKETS – VACANCY RATES (%)
Source: Reis, Inc., Analysis by UCR Center for Forecasting

Industrial permits have grown tremendously in the Inland Empire in recent years, especially in Riverside County. Both Riverside and San Bernardino counties posted their best year for industrial permits in 2017, far outpacing pre-recession highs.

- In 2018, $492 million in industrial permits were issued in Riverside County, a 14% increase over 2017. Industrial permits decreased slightly (-6.7%) in San Bernardino County during the same period. This puts the Inland Empire on track for its biggest year ever in industrial permit valuations, surpassing 2017's record and far above the pre-recession high.

- Year-to-date through the second quarter of 2019, industrial permits in Riverside County totaled $406 million, a 45% increase over the same period in 2018. In San Bernardino County, they totaled $199 million, a very modest 1.4% decrease for the period.

Inland Empire **Demographics**

Over the past year, the Inland Empire outpaced both the state as a whole and neighboring areas of Southern California in population growth. There are several possible explanations for this, including the ratio of births to deaths and net migration, which includes net gains from other counties. The Inland Empire also benefits from comparatively affordable housing, and while it still has a high share of households commuting outside of the region, the average commute time is not much higher than in other parts of Southern California.

Population Estimates

In 2019, the Inland Empire is home to 4.6 million people, a 1.0% increase from 2018. The region is the third largest California metro area, after Los Angeles and the seven-county Bay Area. Population growth for the region was once again among the highest in California, and the largest for any metropolitan area with over a million residents. The growth was well distributed between San Bernardino and Riverside counties. While the City of Riverside is still the most populated incorporated city in the Inland Empire, the population of unincorporated Riverside County (394,200) is larger. Year-to-year changes in the Inland Empire include:

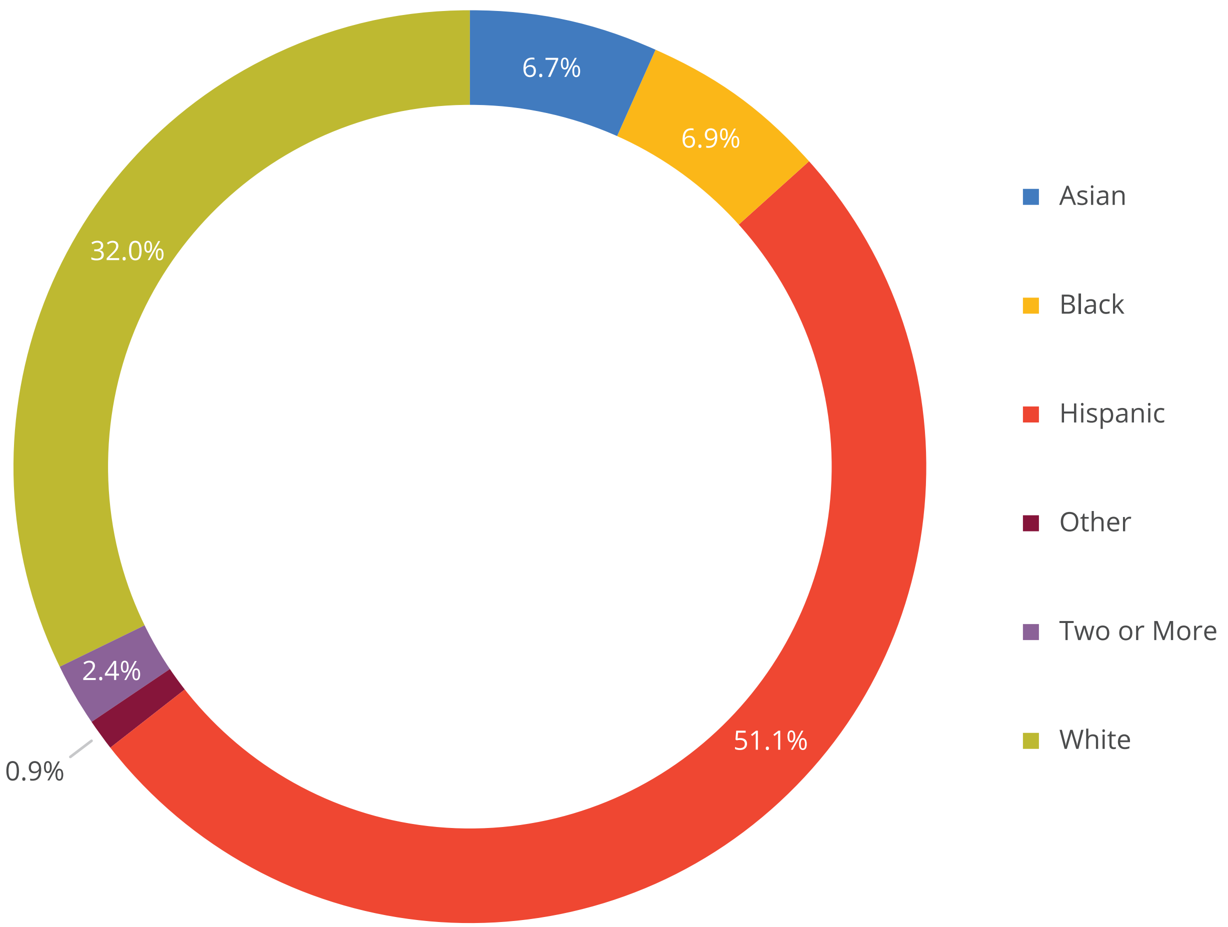
- The population of Riverside County increased by 1.1%.
- The population of San Bernardino County increased by 1.0%.
- Population growth in the Inland Empire outpaced San Diego County (0.6%), Orange County (0.3%), Los Angeles County (0.0%), and California overall (0.5%).
- Of the region's ten largest cities, Ontario grew the fastest at 2.3%
- Twentynine Palms led all cities with a growth rate of 6.3%.
- In a handful of smaller cities, population declined: Blythe (-1.1%), Norco (-0.3%), and Adelanto (-0.1%).

Geography	2019 Population	2018-2019		14-19 (%)
		Abs. Change	%	
Riverside County	**2,440,124**	**27,588**	**1.1**	**6.3**
San Bernardino County	**2,192,203**	**20,686**	**1.0**	**4.2**
Unincorporated Riverside County	394,200	7,107	1.8	8.1
City of Riverside	328,101	1,831	0.6	3.7
Unincorporated San Bernardino County	312,654	1,609	0.5	3.2
City of San Bernardino	219,233	241	0.1	2.4
Fontana	212,078	2,623	1.3	4.4
Moreno Valley	208,297	2,251	1.1	3.9
Rancho Cucamonga	179,412	793	0.4	3.9
Ontario	178,268	4,024	2.3	5.9
Corona	168,101	1,088	0.7	4.7
Victorville	126,543	761	0.6	2.8
Murrieta	118,125	1,155	1.0	7.9
Temecula	113,826	578	0.5	6.6

LARGEST CITIES INLAND EMPIRE
Source: California Department of Finance, Analysis by UCR Center for Forecasting

Race and Ethnicity

The population of the Inland Empire is primarily comprised of Hispanic (51.1%) and White (32.0%) residents, with smaller shares of Black (6.9%), Asian (6.7%), Two or More (2.4%), and Other (0.9%) residents. The figures for Hispanics and Asians have been on an upward trend in recent years. The share of Blacks in the population has increased by 2.7 percentage points since 2012, while the share of Asians has increased by 0.6 percentage points. In contrast, the share of Whites declined 3.3 percentage points over the same period. This is not unique to the Inland Empire – California's White population decreased by 2.2 percentage points, from 39.2% to 37.0%, over the same five-year period.



INLAND EMPIRE RACE AND ETHNICITY
2017
Source: American Community Survey, Analysis By UCR Center for Forecasting

Household Income

Median household income in the Inland Empire increased in 2017 (the latest year for which data is available). However, the region still lags behind other metropolitan areas in Southern California and the state overall. There are two main reasons for this. First, the region's prominent industries – Logistics, Retail, and Administrative – generally have lower paying occupations. And second, levels of educational attainment are somewhat lower than in other parts of Southern California.

While household income is significantly lower than in other parts of Southern California, the Inland Empire has a greater share of households whose income might be considered 'middle class' (i.e. between $50,000 and $100,000). As of 2017, 31.0% of households in the Inland Empire fall into that income bracket, compared to 29.5% in San Diego County, 28.8% in Los Angeles County, and 28.3% in Orange County. The availability of cheaper single-family homes explains some of this discrepancy.

- The median household income in the Inland Empire was $61,994 in 2017, a 6.5% increase from 2016 and a 19.9% increase from 2012.

- Los Angeles County's median household income reached $65,006 in 2017, growing by 6.0% from 2016.

- Orange County saw 5.4% growth between 2016 and 2017, with median household income hitting $86,217.

- Median household income in San Diego County hit $76,207 in 2017, up 7.6% from the previous year.

- The state median household income reached $71,805 in 2017, still considerably higher than the Inland Empire.

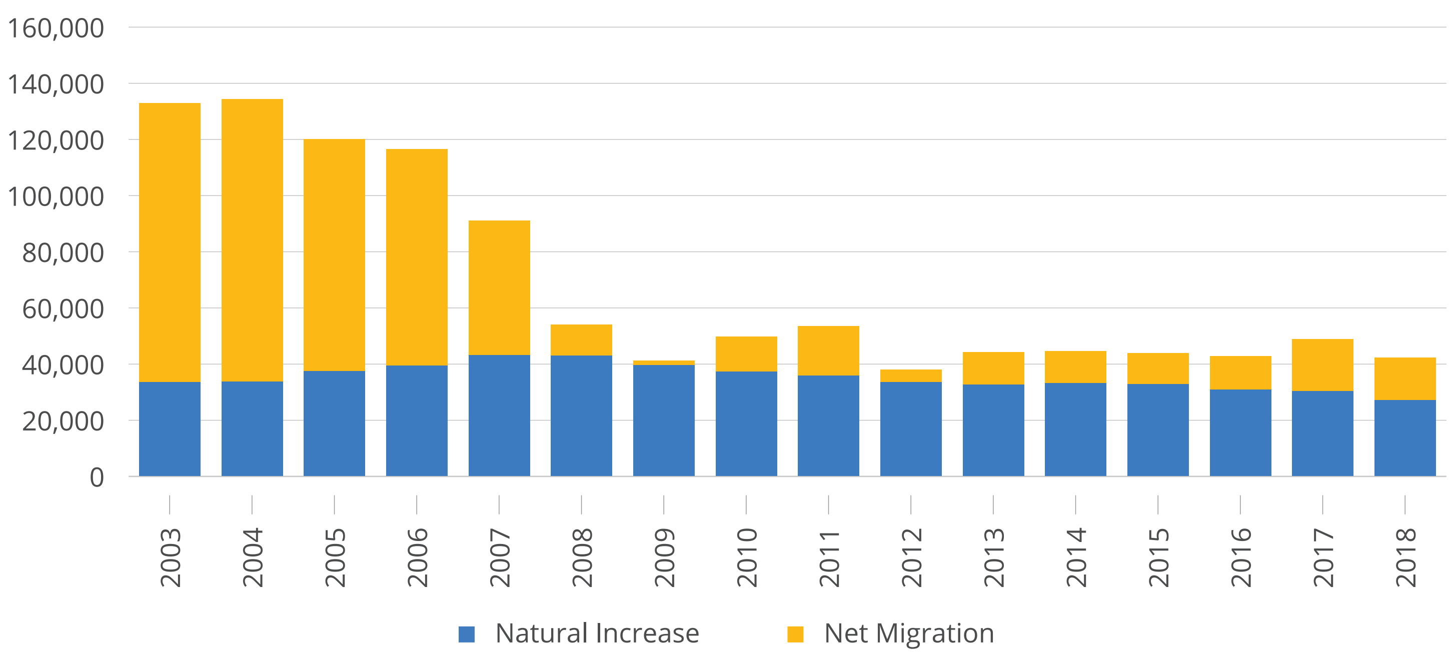
Income Category	Share of Households (%)		12-17 Absolute Difference (P.P.)
	2012	2017	
More than $99,999	20.6	28.5	7.9
$50,000 to $99,999	31.1	31.0	-0.1
$25,000 to $49,999	24.7	21.6	-3.1
Less than $25,000	23.6	18.9	-4.7

HOUSEHOLD INCOME BREAKDOWN INLAND EMPIRE
Source: American Community Survey, Analysis by UCR Center for Forecasting

Migration

Along with natural increases (which accounted for 64% of the total increase), migration was a driving force behind population growth in the Inland Empire in 2018. The California Department of Finance reported that 15,232 people migrated to the Inland Empire in 2018, accounting for 36% of the total population increase. While levels of net migration have been notable throughout the decade, 2004 was easily the high-water mark with 100,900 people. Driven by the lower cost of living, levels of net migration are significantly higher in the Inland Empire than in other parts of Southern California.

- Net migration in the Inland Empire was 15,232 in 2018, down from 18,614 in 2017.
- Los Angeles County and Orange County experienced negative net migration in 2018 with figures of -34,095 and -6,067 respectively.
- San Diego County experienced positive net migration in 2018 with 5,123 more people moving into the county than out of it.
- Of the 15,232 net migrants to the Inland Empire, 11,710 were foreigners and 3,522 were from elsewhere in the United States.



NET MIGRATION VS TOTAL NATURAL INCREASE INLAND EMPIRE
2003 TO 2018
Source: California Department of Finance, Analysis By UCR Center for Forecasting

Commuting Patterns

Most workers in the Inland Empire both live and work in the region; it is affordable, it offers a variety of suburban lifestyles, and yet it is close to coastal Southern California and other areas of the Southwest. Still, a large number of residents have jobs in other Southern California regions, often because they believe take-home pay will be higher. The situation has been improving in recent years though despite a large share of its residents still commuting to jobs outside of the region.

From 2012 to 2017, the share of workers commuting outside the Inland Empire decreased from 30.3% to 29.5%. Still, with employment across all of Southern California increasing over this period, the absolute number of long-distance commuters increased. While commute times are not that much higher than in the rest of Southern California, they are still the highest and they have increased on average by 1.5 minutes over the last five years, reaching 32.7 minutes in 2017.

- Between 2016 and 2017, the share of workers in the Inland Empire that commuted for more than one hour in each direction declined slightly from 17.7% to 17.1%, still up from the 2012 figure of 16.4%.

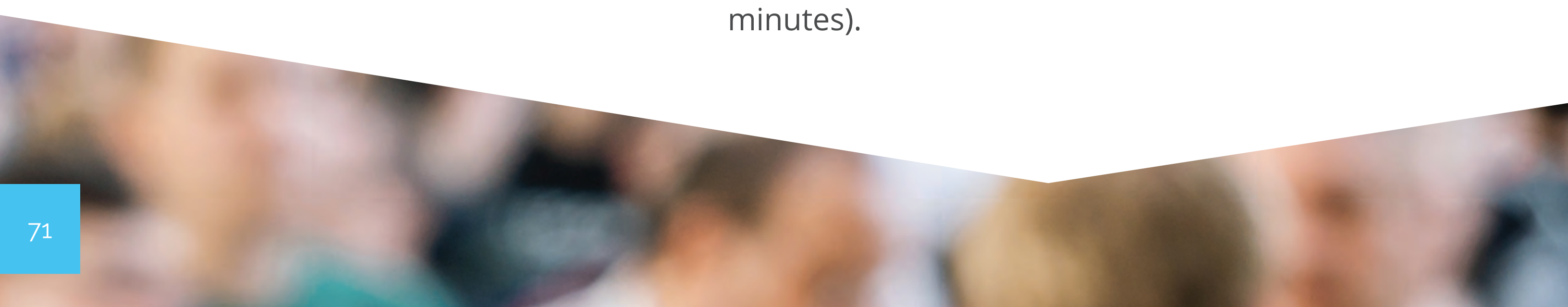
- The share of workers commuting for one hour or more in each direction was significantly lower in other parts of Southern California – San Diego (7.1%), Orange County (9.8%), and Los Angeles County (14.9%).

- In 2017, the share of workers commuting outside of their region was also significantly lower in Los Angeles County (7.2%), Orange County (14.5%) and San Diego County (1.9%).

- The average commute time for workers in the Inland Empire (32.7 minutes) was the highest in Southern California.

- Los Angeles County (31.7 minutes), Orange County (28.1 minutes), and San Diego County (26.3 minutes) all had lower commute times in 2017 than the Inland Empire.

- While commute time for workers in the Inland Empire increased by 1.5 minutes between 2012 and 2017, commutes for workers throughout Southern California increased too – Orange County (26.7 to 28.1 minutes), San Diego County (24.6 to 26.3 minutes), and Los Angeles County (29.6 to 31.7 minutes).



Long commute times mean a significant share of income goes towards fuel, vehicle maintenance, and child care. Ultimately, households must evaluate the trade-off between where they work and where they live. For many, there is greater flexibility in work location than place of residence. It can be harder to move than it is to commute, or find a job closer to home.

As jobs have grown throughout Southern California in recent years, the absolute number of out-of-area commuters has increased. Over time, the Inland Empire will continue to develop in order to retain those workers. Relative affordability has made the Inland Empire attractive to a young demographic that, with the right business development, could signal a more diverse local workforce and, in turn, help spur the local economy on to even greater heights.

Acknowledgments

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Cover and Book Design

The Brandsmith, LLC

Print Production

Copyland Printers, Inc.

Thank you to **our affiliates**

California Association for Micro Enterprise Opportunity (CAMEO)

California Consulting, LLC

City of Hesperia

City of Murrieta Economic Development Department

Fontana Chamber of Commerce

Greater Riverside Chambers of Commerce

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Hong Kong Association of Southern California

Riverside County Transportation Commission

Western Riverside Council of Governments

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