

2014-2015 ORANGE COUNTY WORKFORCE INDICATORS REPORT



TABLE OF CONTENTS

Welcome	3
Introduction	6
Orange County Demographic Trends	12
Age Trends	14
Population Growth	14
Ethnic Composition	16
Educational Attainment, Income, and Poverty	17
Industry Cluster and Occupation Trends	20
Unemployment	21
Cluster Employment and Salaries	22
Occupational Growth Trends	24
Education and Workforce Training Trends	28
College Eligibility	29
API, SAT, and High School Exit Exam Performance	30
English Learners	35
Dropout Rates	37
STEM Related Degrees	38
Skills Gap: What Does it Mean for Orange County	40
Opportunity: Narrowing the Skills Gap in Orange County by Data Driven Analysis	42
Sector Spotlights	44
Advanced Manufacturing	45
Health Care	47
Information Technology	49
Veteran Employment in Orange County	52
Transferrable Skills of Veterans	55
Local Programs and Collaboration Efforts	57
Cross-Cutting Industry Highlights	60
International Trade	63
Information Technology	66
Creativity	67
Green Technology	68
Workforce Housing	70
Home Ownership	72
Renting in Orange County	74
Report Partners	76
Orange County Business Council	77
Orange County Workforce Investment Board	78
Acknowledgements	79



Dear Workforce Development Partner:

Orange County Business Council (OCBC) and the Orange County Workforce Investment Board (OCWIB) are pleased to present the 13th annual "2014-2015 Orange County Workforce Indicators Report." This research highlights the central accomplishments of Orange County's employers, educators and workers, the education and workforce training system, as well as remaining challenges that California must address to close the skills gap and develop a highly-trained workforce for a competitive 21st century economy.

Last year's report focused on economic trends shaping the past 10 years of workforce development. The report advocated that Orange County proactively establish an innovative and effective foundation through the new Common Core State Standards. In this report, Dr. Wallace Walrod, OCBC's Chief Economic Advisor, explores how to close the skills gap for businesses--findings show there are plenty of job openings in a time of high joblessness. Why is the Advanced Manufacturing cluster, for example, having a difficult time finding skilled workers? Is it a mismatch of skills? Has automation and robotics replaced the job seeker? Employers continue to encounter prospective workers lacking relevant, needed skills for the jobs available.

With impending reforms to education in California and the nation this year, OCBC's Workforce Development Committee examined several broad based issues, including accountability, recruitment of teachers with STEM training, business engagement in pre- school education, the authorization of the Workforce Innovation and Opportunity Act, and outreach to Latino and Asian parents encouraging English language acquisition and fluency to close the achievement gap.

The theme for this year's conference is "Ensure Future Success by Narrowing Today's Skills Gap." Orange County is a great place to live, work and thrive. But the challenge remains: how to improve upon success in a new economy? Orange County has a solid education and workforce training foundation and must continue to work diligently to close the skills gap by:

- Assisting businesses to develop their own training programs to yield qualified workers; and
- Identifying, funding and supporting community efforts to produce local home-grown talent.

Together, OCBC and the OCWIB have built an enduring alliance to seek out creative workforce solutions, educational success and the best in workforce training. We hope you will gain a new understanding about these issues in a spirit of collaboration and partnership. We encourage you to utilize today's materials to plan for future success in all endeavors.

Sincerely,

A handwritten signature in black ink, appearing to read "Lucy Dunn".

Lucy Dunn President and CEO
Orange County Business Council

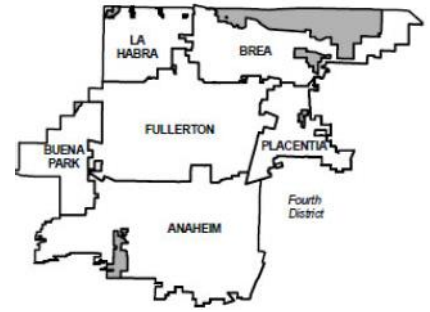
A handwritten signature in black ink, appearing to read "Bob Bunyan".

Bob Bunyan 2014 Chair
Orange County Workforce Investment Board



SHAWN NELSON
CHAIRMAN, ORANGE COUNTY BOARD OF SUPERVISORS
SUPERVISOR, FOURTH DISTRICT

ORANGE COUNTY HALL OF ADMINISTRATION 333 W.
SANTA ANA BLVD.
SANTA ANA, CALIFORNIA 92701 PHONE (714)
834-3440 FAX (714) 834-2045
shawn.nelson@ocgov.com
bos.ocgov.com/fourth



On behalf of the Orange County Board of Supervisors, I am pleased to announce the release of the Annual Orange County Workforce Indicators Report and welcome you to the Workforce Development Conference.

The long-standing partnership between the Orange County Investment Board and the Orange County Business Council has allowed policy makers across the county to make decisions based on reliable workforce, education and economic development data. This report highlights the strengths and unique features of our region, while also shedding light on areas in need of improvement.

The Workforce Indicators Report in conjunction with the Orange County Comprehensive Economic Development Strategy (CEDS), provide the information and analysis for businesses, nonprofits and educational institutions to shape their future endeavors for serving Orange County. These reports present a wealth of data and information, and are free and easily accessible for everyone through the Orange County Workforce Investment Board. The County of Orange is proud to support the Workforce Board's ongoing efforts to maintain and improve our local economy as well as innovation in workforce development throughout the region.

The Board congratulates the Orange County Workforce Investment Board and the Orange County Business Council on the 2014-2015 Workforce Indicators Report.

Sincerely,

Chairman Shawn Nelson
Orange County Board of Supervisors



INTRODUCTION
2014-2015
WORKFORCE
INDICATORS

Macro-economic trends have permanently shifted in the last decade, transforming the nation's workforce development landscape. Orange County is thriving in the post-recession economy, establishing an innovative and emerging foundation for future job growth and long-term prosperity.

WORKFORCE INDICATORS INTRODUCTION



The Great Recession caused devastating job losses and dealt severe economic hardship to the national and global economy. In Orange County, 2013 was the first year since the downturn that was characterized by widespread recovery. There was lowered unemployment rates, recovered home prices, business expansion, and newfound growth in Orange County's signature industry sectors such as health care, advanced manufacturing, and information technology. The downturn created persistently high unemployment rates among Americans aged 18 to 24, revealing a nationwide challenge for the next generation workforce to attain the stability of new employment opportunities and keep pace with the costs of supporting a household. Employers throughout the country continue to report that they are unable to find workers possessing the skills that their firms need. These realities suggest a skills mismatch between educational institutions and employers needs, particularly in high-STEM (science, technology, engineering and mathematics) areas of expertise; education systems must be adapted to current workforce needs if they are to sufficiently meet the task of preparing workers for success in the years ahead.

In 2014, Orange County continues to make great strides in driving economic growth for Southern California. Orange County's unemployment reached five-year lows, home values reached five-year highs, and cutting-edge infrastructure projects once again moved forward. Orange County's recovery was quick compared to surrounding counties and California as a whole thanks to the demographic diversity of its residents, competitive business environment, highly-skilled workforce, and continued job growth in innovative emerging industries. While unemployment has decreased, there is still room to grow jobs, create economic growth, and expand business opportunities through targeted economic development investments in the region.

COMPETING SUCCESSFULLY BY ADJUSTING TO SHIFTING TRENDS

During the difficult economic environment of the last decade, the private sector became "lean and mean" in terms of its hiring strategies. Although a large portion of the jobs lost in Orange County may not return, emerging industries within the cross-cutting clusters of information technology, advanced manufacturing, international trade, creative professions, and green technology provide a much-needed boost to job creation and regional competitiveness. In addition, the county's workforce and educational leaders are adapting their placement systems to remain competitive and relevant, and to support increased investment in high-tech degrees related to STEM disciplines.

To sustain continued economic growth, Orange County has built the "OC Network" (the Orange County Regional Workforce & Economic Development Network) to support sector-wide partnerships. This network strives to utilize the County's natural strengths of its innovative spirit, high quality of life, desirable geography, and receptiveness to incorporating a diverse mix of industries to prepare for a future-ready workforce. With continued focus and diligence, Orange County can differentiate itself from its peers by staying ahead of economic trends in the components critical to regional prosperity.

INNOVATION LEADS TO JOB CREATION AND WAGE GROWTH

While the Great Recession produced substantial economic and workforce challenges, it also created a variety of new opportunities for increased economic activity and job creation. This year's report identifies the most significant opportunities for economic growth and job creation while highlighting the challenges Orange County currently faces. Understanding the dynamics of the post-recession regional economy will be crucial to maintaining Orange County's future economic viability.

Orange County continues to demonstrate the building blocks for innovation such as:

- Having a large number of high-tech industries and prominent companies;
- Being a world-class leader in new, emerging industries, including advanced transportation, alternative energy, medical devices and computer gaming;
- Being a home to a creative problem-solving IT-savvy workforce exemplified by Disney's Imagineers; and
- Having a large concentrations of renowned higher education institutions, business incubators, and venture capital investment.

“Understanding the dynamics of the post-recession regional economy will be crucial to maintaining Orange County's future economic viability.”

These assets allowed Orange County to thrive within its shifting demographic and economic landscape. As demographics and industries within the county evolve, Orange County must keep its innovative and competitive edge. The burden of developing innovative policies and mechanisms that adapt to shifting trends rests on successful collaboration between Orange County elected officials, the business community, and policymakers.

CREATING JOB GROWTH BY UNDERSTANDING KEY ECONOMIC AND WORKFORCE DRIVERS



There is nearly unanimous agreement among economic development and workforce experts on the need for industry-driven, sector-focused workforce development strategies that align with economic development priorities. By using detailed information on current and projected workforce demand trends provided by the private sector, regions can work to:

- Align education;
- Align appropriate funding and programming;
- Set aggressive but attainable goals; and
- Encourage cross-sector collaboration on the development and implementation of educational and workforce training initiatives that support economic development objectives.

One recent success story involves the U.S. Department of Labor Workforce Innovation Fund grant awarded to Orange County for the Information Technology Cluster Competitiveness Project, which will increase the number of training programs providing nationally-competitive Information Technology (IT) skills, create an expanded and sustainable pool of skilled IT workers, and ultimately increase growth and competitiveness in the local IT industry cluster. With a focus on long-term sustainability and fostering replication, the project consortium partners are currently implementing the “IT Roadmap” model that communities across the country can adopt wherever the IT cluster is a significant economic driver.



Another example of Orange County’s innovative pursuit of workforce investment is California’s Regional Industry Cluster of Opportunity (RICO) grant program that funds research to identify fruitful areas of investment that improve alternative fuel infrastructure and workforce training in advanced transportation. Orange County’s emerging potential in hydrogen fueling infrastructure and new workforce training opportunities for alternative fuel vehicle technicians have both been recognized in the early stages of the investment strategy as potential bright spots for the Orange County economy.

In order to help understand and appreciate the economic and workforce foundations on which Orange County stands, the 2014-2015 Orange County Workforce Indicators report highlights the current and projected trends that will shape the future of the county. It contains sections highlighting Orange County’s health care, manufacturing, and information technology sectors, as well as paying special attention to the prevalence of Orange County’s military veterans. Veterans are a talented and dynamic workforce pool aptly suited for a variety of high-tech occupations. Special features include an in-depth discussion of the emerging “Skills Gap” challenge from multiple perspectives, including a county-wide “New Skills at Work” analysis as well as a STEM perspective on the importance of developing a future workforce for the county’s most dynamic, cutting-edge sectors, which provide many of the county’s unique competitive strengths.

Continued emphasis on the need for greater industry engagement, data-driven solutions, clear goals, and cross-sector collaboration suggests the emergence of a new “best practice” approach to workforce development in Orange County. Orange County Business Council (OCBC) and the Orange County Workforce Investment Board (OCWIB) are pleased to collaboratively promote Orange County’s key competitive advantages while simultaneously engaging, supporting, and connecting groups of workforce, education and business community leaders to ensure a prosperous economic future. This report aims to inspire Orange County leaders to step up, work together, and craft the education and workforce solutions needed to keep Orange County moving forward.

“ This report aims to inspire Orange County leaders to step up, work together, and craft the innovative education and workforce solutions needed to keep Orange County moving forward. ”

THE 2014-2015 ORANGE COUNTY WORKFORCE INDICATORS REPORT AT A GLANCE: HOW TO USE THIS REPORT

The 2014-2015 Orange County Workforce Indicators Report features a robust compilation of data that covers demographics, industry clusters, education and training, and workforce housing trends. The report provides an extensive, multifaceted source of data and analysis useful to any organization or individual interested in learning more about the county’s projected economic and workforce climate. Industry cluster and occupational analyses of Orange County are the foundation of this report’s analytical framework, giving readers world-class insight into Orange County’s core competencies as a place to do business. The current demographic data used in the report is not only an ideal starting point for exploratory research on the county’s workforce, but also provides the basis for commentary and interpretation to give potential researchers a well-rounded, complete picture of Orange County and its residents.

The information and resources within this report possess broad utilization potential for many purposes, including:

- Planning – City planners and policymakers alike can learn the facts about Orange County’s demographic trends, housing market, and education system in order to inform sound decision-making and create projects that strike at the core of Orange County’s economic needs;
- Forecasting – Local economists can rely on the 2014-2015 Workforce Indicators Report to provide the latest in labor market trends compiled in an accessible format, and can help support a variety of academic and market-oriented studies;
- Grant Writing – Non-profits and other organizations may use the report as compelling evidence for grant funding pursuits within a wide variety of investment areas; and
- Business Decision-Making – The report is a tool for current or aspiring Orange County business owners to find many useful data points and insights regarding industry and occupation trends, and the regional consumer population demonstrating the vibrancy of the business climate.

The featured data within this report can serve as a starting point, primary source or basis for numerous other market research and analysis applications. The issues discussed in the report are of interest to any Orange County stakeholder, from homeowners to regionally-based business subsidiaries. For readers outside of Orange County, this report provides a current picture of the regional economy and its strategic possibilities, demonstrating the region’s potential as a receptive and thriving market to do business. The 2014-2015 Workforce Indicators Report’s goal is to be a comprehensive and nuanced research reference on Orange County’s workforce environment, standing as the go-to resource for academic and political research, corporate strategic investigation, and local inquiries about the vitality of the Orange County economy.

OCECONOMY.ORG

An online compliment to the 2014-2015 Workforce Indicators Report is *OCEconomy.org*. It is a regularly updated and extensive series of data and visual analyses of Orange County’s economic and workforce environment delivered through a partnership between OCWIB and the County . The website covers population and employment, economic development, and housing. Within each of these categories is a broad gathering of information that includes both empirical data as well as indicators of consumer, business and housing market confidence. For monthly updates on these and many other Orange County economic indicators, please visit *OCEconomy.org*.



ORANGE COUNTY DEMOGRAPHIC TRENDS

Orange County's demographic composition shows a rapidly aging population that is becoming increasingly more diverse in culture, character, and community participation. Regional leaders in business and civics may glean insights from these facts to plan around the county's shifting population trends, guiding Orange County's residents toward long-term economic success and prosperity.

ORANGE COUNTY DEMOGRAPHIC TRENDS

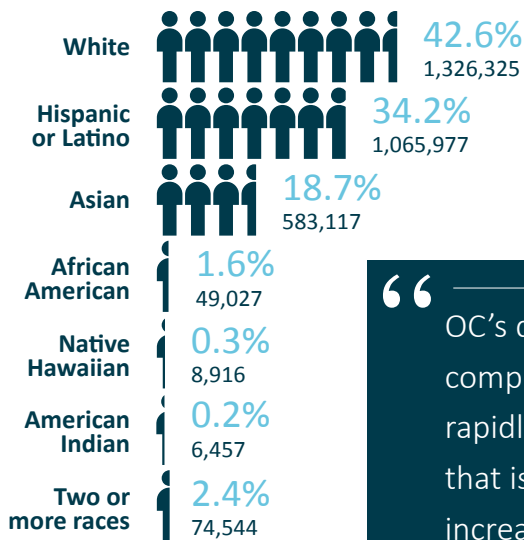


WHY IS THIS AN ISSUE?

Effective education and workforce training programs must successfully accommodate Orange County's changing economic, population, and workforce demographic trends — specifically the need for initiatives and strategies that support an aging population and diverse ethnic communities. Orange County's rising older population will require a broad range of health care and other social services, innovative housing options, and life enrichment programs to sustain a high quality of life. With a culturally diverse community and workforce comes the critical need for English language proficiency programs and initiatives to increase educational attainment across all levels – K-12, community college, and university – in order to build a well-educated, high-quality workforce that meets both current and future labor market demands.

ORANGE COUNTY DEMOGRAPHIC SNAPSHOT

Population by Selected Ethnicity



3,114,363
Total Population

“ OC’s demographic composition shows a rapidly aging population that is becoming increasingly more diverse in culture, character, and community participation. ”

Population by Age

Age	Number	Percent
< 5	191,176	6.1%
5--9	200,565	6.4%
10--14	205,702	6.6%
15-19	215,190	6.9%
20-24	230,813	7.4%
25-29	221,965	7.1%
30-34	212,592	6.8%
35-39	202,504	6.5%
40-44	226,299	7.3%
45-49	227,074	7.3%
50-54	226,391	7.3%
55-59	198,138	6.4%
60-64	158,789	5.1%
65-69	127,924	4.1%
70-74	92,934	3.0%
75-79	68,528	2.2%
80-84	51,881	1.7%
85+	55,898	1.8%

Source: U.S. Census Bureau, Population Estimates Program

**HOW DO
WE KNOW
THIS ISSUE
EXISTS IN
ORANGE
COUNTY?**

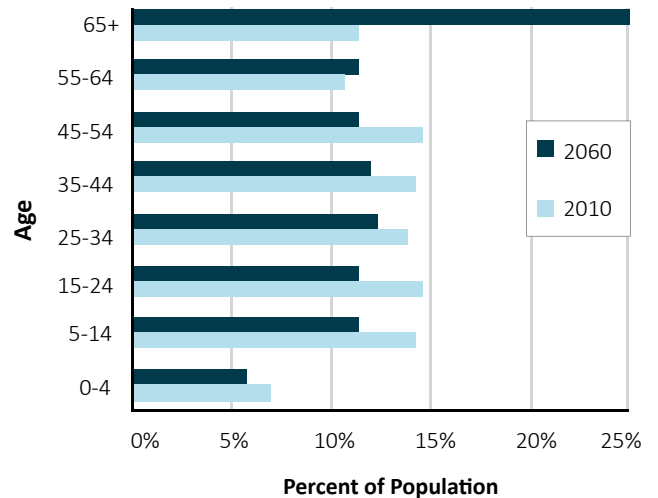
AGE TRENDS

Orange County's current population is 3,114,363, with an average age of just over 36 years. Additionally, 26.1 percent is under the age of 19 years old, 61.2 percent is between the ages of 20 to 64, and seniors at or above the age of 65 comprise 12.8 percent of the total population. Compared to state totals, Orange County has a slightly larger proportion of working-age residents (20 to 64), a slightly smaller quantity of youths (5 to 19), and a slightly larger percentage of seniors (65 and older). These age trends can generally be attributed to slightly lower levels of natural increase (defined as total births minus total deaths in a given time period), but they also indicate the county's larger concentration of active workforce participants. Projections over the next several decades show both a dramatic rise in the county's concentration of residents over the age of 65 and an associated drop in the relative proportion of all other age groups as a percentage of the total population.

POPULATION GROWTH

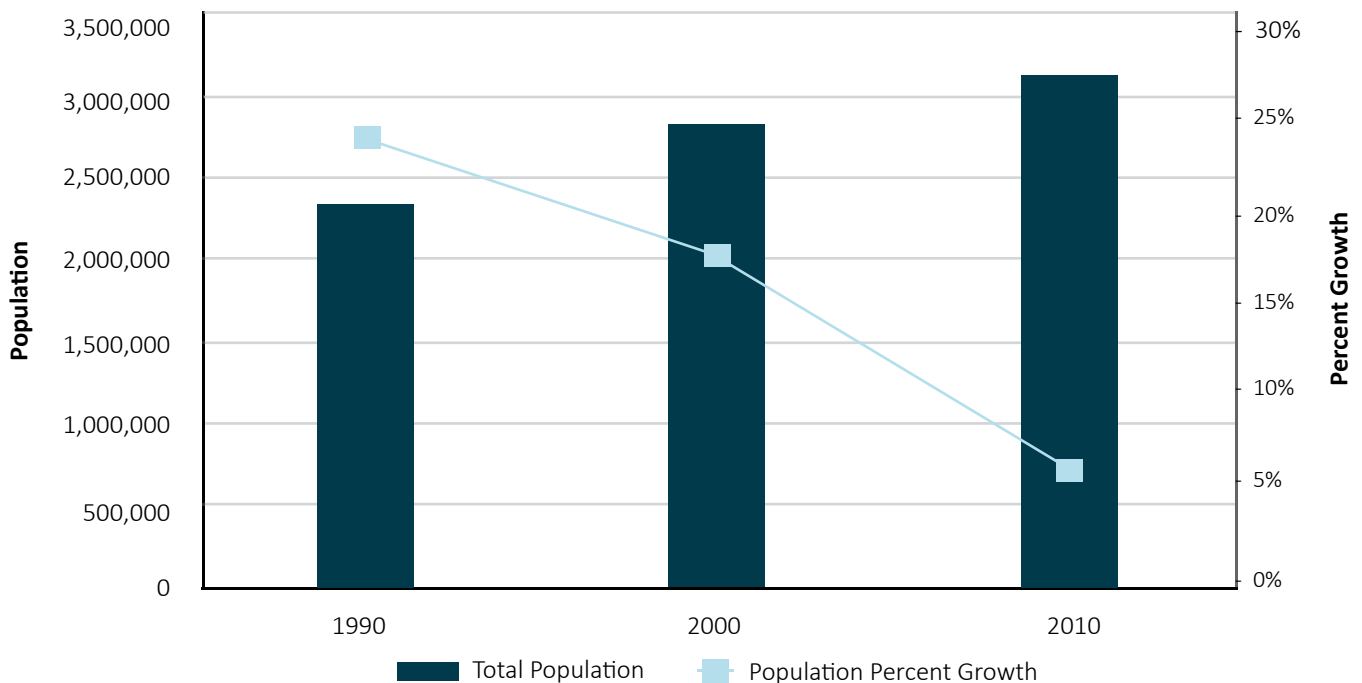
Orange County's population increased by approximately 600,000 over the last two decades, with the majority of the growth occurring in the 1990s. The county traditionally exceeded state and national population growth rates since 1950, but the population growth rate from 2000 to 2010 was just above 5 percent, a significantly slower rate than the prior 50 years. From 2010 to 2013, however, the population grew by an estimated 3.5 percent, once again placing it back above the state level of 2.9 percent. The California Department of Finance estimated residents rose 30,134 from 2012 to 2013, which increased the population to over 3.1 million.

Projected Components of Population by Age in Orange County, 2010-2060



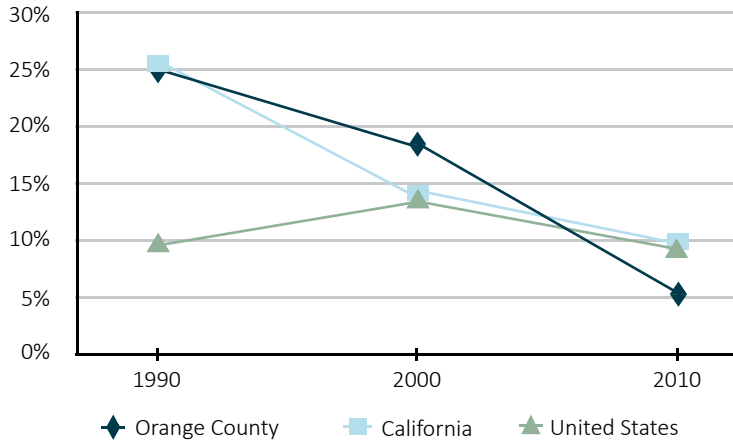
Source: State of California, Department of Finance

Orange County Population Growth Trends, 1990-2010



Source: U.S. Census Bureau, 2010 Census

Orange County, California and U.S. Population Growth Comparison



Source: U.S. Census Bureau, 2010 Census

Orange County Population Projections

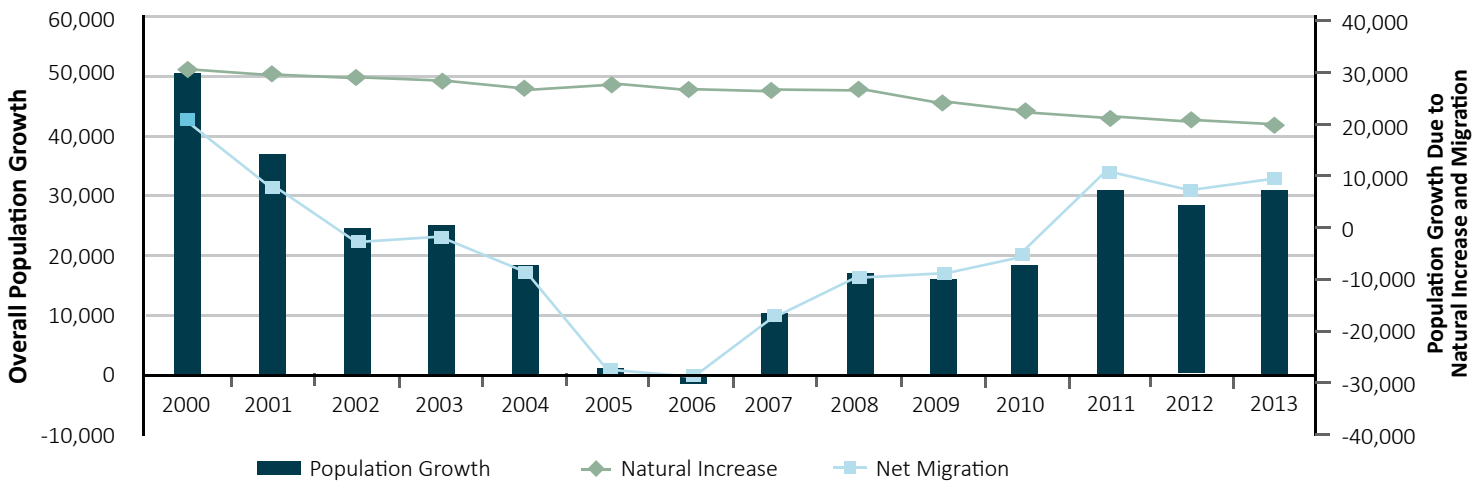
YEAR	POPULATION
2010	3,017,327
2015	3,141,834
2020	3,198,279
2025	3,251,694
2030	3,286,100
2035	3,311,811
2040	3,321,037
2045	3,321,269
2050	3,324,920
2055	3,327,600
2060	3,331,595

Source: Center for Demographic Research, CSUF

Historically, net population inflow (moving into Orange County from other states and Californian counties) was the chief driver of population growth, especially between 1950 and 1980. In recent years, natural increase was the dominant source of the county's population growth. After nearly 10 years of negative net migration growth, Orange County returned positive net migration growth in the current decade, accounting for a population increase of 25,807 since 2010. Natural population increases averaged roughly 30,000 per year prior to 2000, but significant declines in natural increase began in 2006 and continued each following year. From 2008 to 2011, during the depths of the recession, the rate of natural increase declined by roughly 8.5 percent each year. Natural increase settled at roughly 20,500 per year in 2011, and maintained this rate through 2013. Although Orange County continues in its economic recovery, natural increase rates have yet to return to pre-recession levels. However, strong economic recovery led to the return of positive net migration, once again driving overall population growth in Orange County forward.

In 2012, the three largest cities population-wise were Anaheim (337,471), Santa Ana (326,608) and Irvine (213,880). Of these three cities, Irvine experienced the highest percent population growth, increasing by 7.4 percent since 2010. Anaheim and Santa Ana achieved only 1.3 percent growth, and 0.4 percent growth respectively. The California State University, Fullerton (CSUF) Center for Demographic Research projects a steady population growth rate for Orange County until the 2030 to 2035 time period, at which point the growth trend is projected to level off.

Orange County Population Growth, 2000-2013

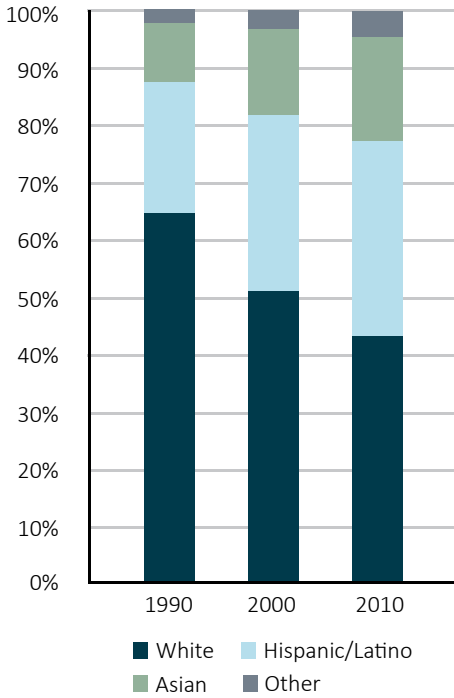


Source: California Department of Finance, Demographic Research Unit

ETHNIC COMPOSITION

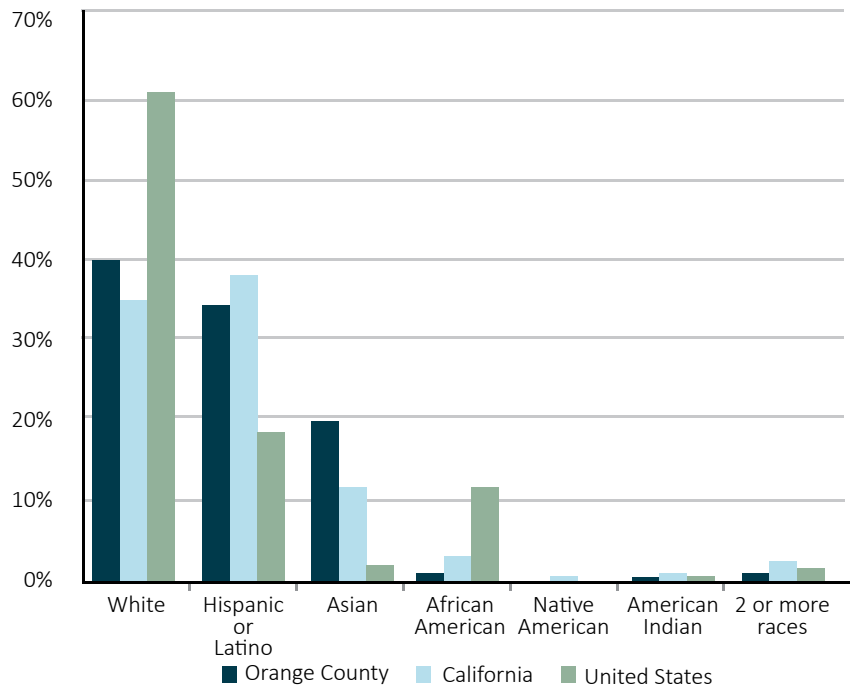
Orange County is projected to become more ethnically diverse, with Latinos and Asians comprising an increasingly large share of the county's population. Since 2005, Latinos accounted for more than 50 percent of natural population increase, followed by Asians at 25 percent. Although Latinos comprise a higher proportion of the total population (33.7 percent in 2010), the proportion of the Asian population increased at a greater rate in the last two decades. Overall, Orange County's Asian population increased by 115.8 percent from 1990 to 2010, compared to Latinos increase of 79.3 percent.

Orange County Ethnic Composition, 1990-2010



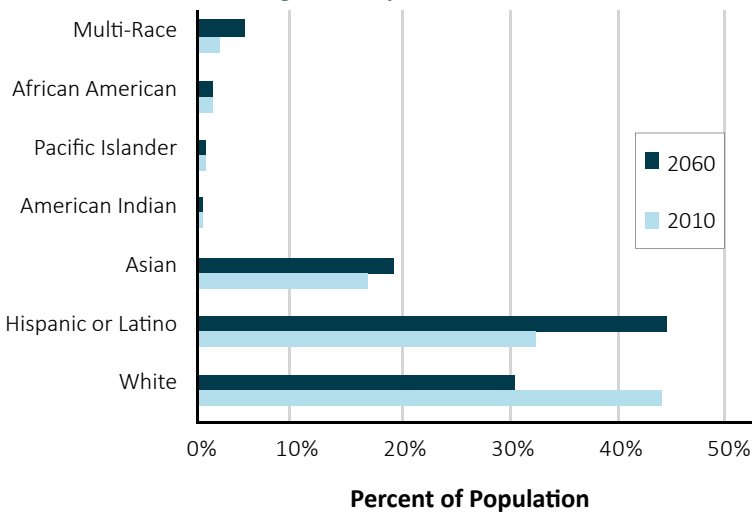
Source: U.S. Census Bureau, 2010 Census

Orange County and U.S. Ethnic Comparison, 2013



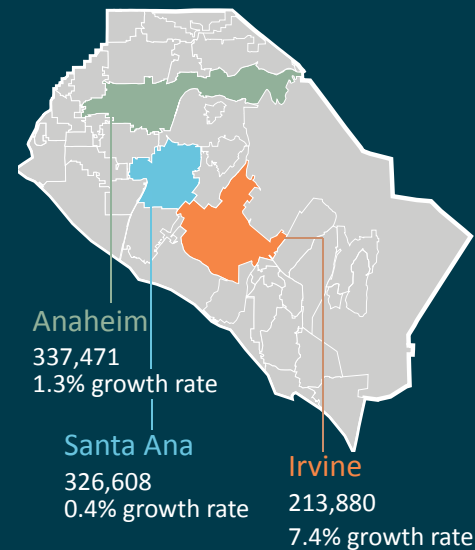
Source: U.S. Census Bureau: State and County Quick Facts

Projected Components of Population by Ethnicity in Orange County, 2010-2060



Source: State of California, Department of Finance

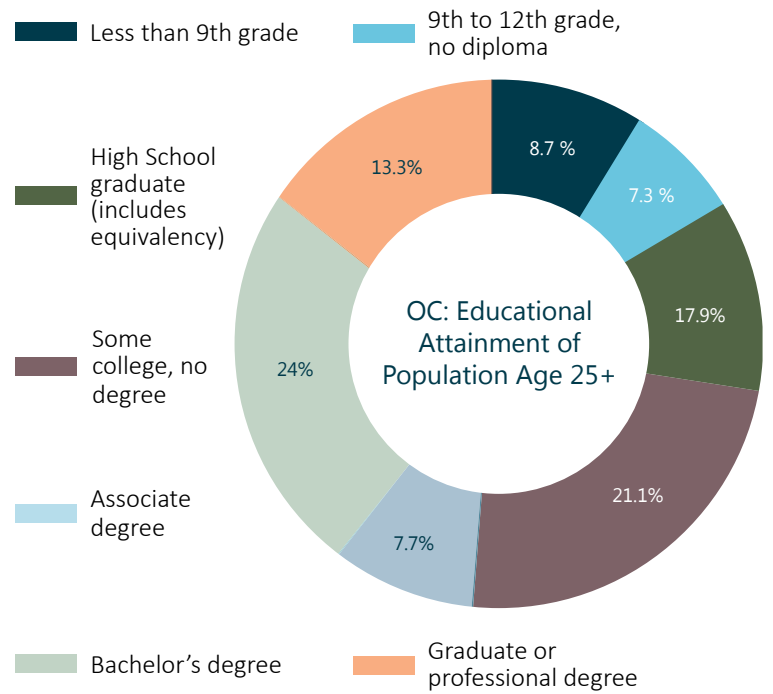
ORANGE COUNTY'S THREE LARGEST CITIES BY POPULATION



EDUCATIONAL ATTAINMENT, INCOME, AND POVERTY

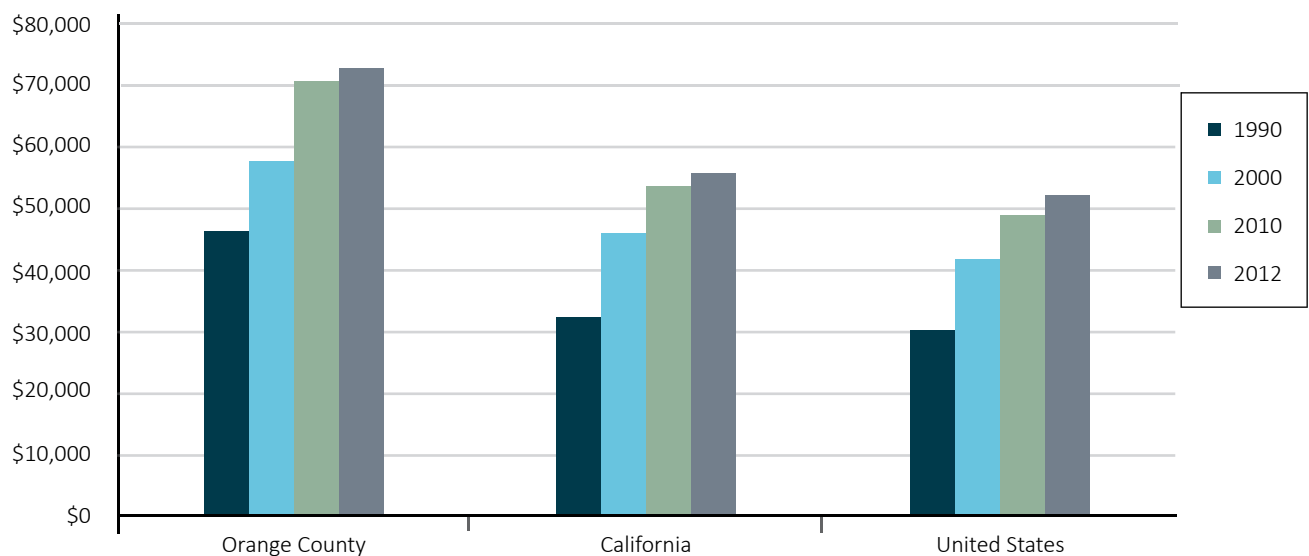
A large proportion of Orange County residents are college-educated; nearly half of the population holds at least an associate degree, and an additional 21.1 percent obtained some form of collegiate training. However, 16 percent of the population above the age of 25 has not obtained a high school diploma, and over one-third of adults have no post-secondary education. This demonstrates an ongoing need for educational pathways to help residents better prepare for good-paying jobs that typically require greater educational attainment. If the region aspires to continue as a knowledge-based, globally competitive economy, Orange County will need to grow a better-educated, better-trained workforce, especially in the STEM disciplines.

The median household income of residents is roughly \$71,983 – a level of earning nearly \$15,000 greater than the California state median wage and more than \$20,000 higher than the United States median wage. However, the year-over-year increase in earning power grew more gradually in Orange County, improving by only 1.6 percent in the last two years compared to growth of 5 percent at the state level and 3.5 percent at the national level. The slower growth is likely due to the preponderance in part-time and lower-paying service sector jobs.



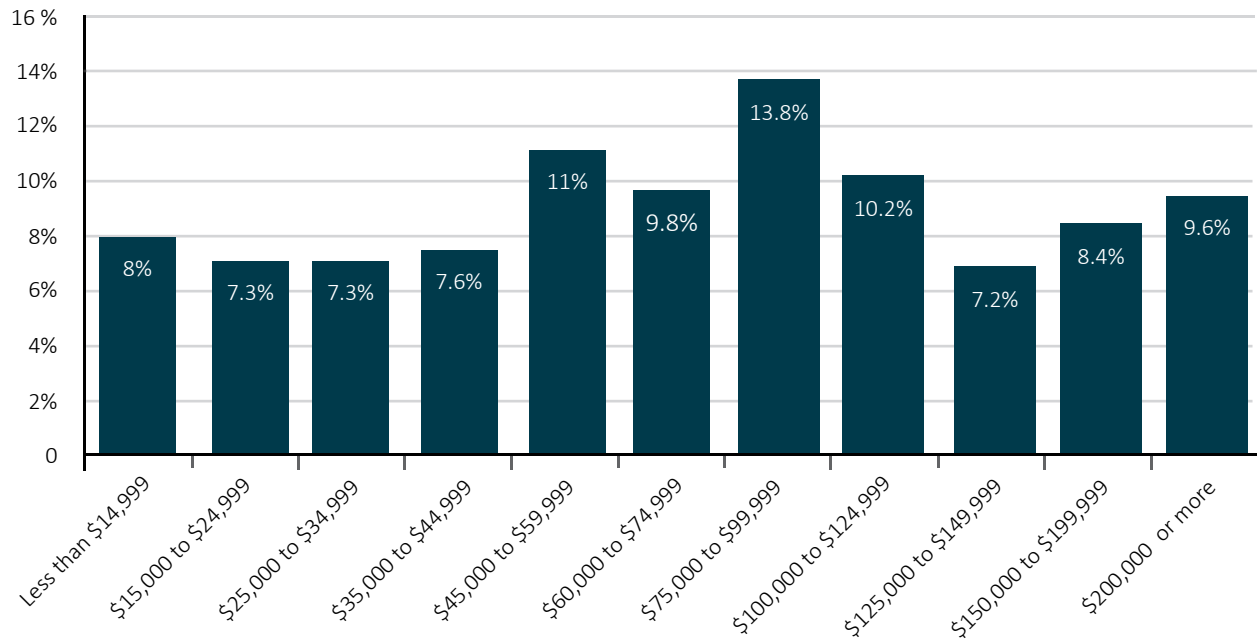
Source: American Community Survey

Median Household Income Comparisons



Source: State of California, Department of Finance

Orange County Median Household Income Categories



Source: American Community Survey

According to the Official Poverty Measure (OPM) methodology, poverty levels for the county's overall population appear less severe than the averages for the United States, California, and neighboring Southern California counties. Orange County's official poverty rates also grew more slowly than peers. However, there is recent evidence that the official methodology does not capture the true extent of the problem for places like Orange County, under counting struggling families in need of assistance. The California Poverty Measure (CPM), which was recently developed by the Public Policy Institute of California (PPIC) and Stanford University, is a tailor-made method of estimating poverty rates in California counties with greater precision regarding regional differences in terms of overall cost of living — especially housing — and other factors unique to California. Factoring in these additional costs to families in poverty allows the CPM to calculate a more realistic measure of poverty than the OPM.

2011 Poverty Rates by Region

County	Percentage in Poverty, Official Poverty Rate Measure	Percentage in Poverty, CPM Measure	OPM-CPM Differential	Percentage of Children Ages 17 and Below in Poverty
Orange	12.8%	24.3%	11.5%	17.9%
Los Angeles	18.2%	26.9%	8.7%	27.2%
Riverside	15.9%	20.4%	4.5%	24.9%
San Bernardino	18.4%	19.5%	1.1%	28.3%
California	17.0%	22.0%	5.0%	23.8%
United States	15.9%	—	—	22.6%

Sources: American Community Survey, Public Policy Institute of California, Stanford Center on Poverty and Inequality

Poverty in Southern California rose significantly in the last two decades and is acutely concentrated in households of lower-educated workers. In considering root causes of the poverty issue, adult educational attainment appears to be the major contributing factor, as well as the types of jobs being created. Residents with lower levels of education are likely to find limited employment opportunities with mostly low (and stagnant) wage potential. Poverty rates for working residents without a high school diploma are about 26 percent in Southern California, 60 percent higher than for those with a high school diploma.

Although Orange County is among the lowest-poverty regions in California by the OPM standards, the CPM shows a startling difference in poverty levels. With a CPM estimated poverty rate of 24.3 percent, Orange County has the fourth-highest poverty rate compared to 41 Californian counties, differing from the official poverty rate by 11.5 percent. This disparity is largely due to Orange County's high cost of housing and appears to disproportionately affect youth and the working poor.



INDUSTRY CLUSTER AND OCCUPATION TRENDS

Shrugging off the long-lasting effects of the Great Recession, Orange County's improving economic situation is demonstrated by a declining unemployment rate and robust hiring in such diverse sectors as professional and business services, health care, construction, and tourism. Relative to the state and nation, Orange County's accelerated job creation and economic growth continues to enhance its reputation as an economic engine, center of innovation, and entrepreneurial hub.

INDUSTRY AND OCCUPATION TRENDS



UNEMPLOYMENT

WHY IS THIS AN ISSUE?

During the Great Recession, employers survived by cutting back on personnel to handle business operations. Even coming out of the recession, many employers continued to maintain this leaner approach to operational efficiency, choosing to conservatively fill out new job functions on an as-needed basis. Hiring trends in several key industries over the last twelve months point to continued economic growth, job creation, and lower unemployment in Orange County due to:

- The county's diverse industry cluster base;
- Varied composition of diverse high-wage industries;
- Active and increasingly entrepreneurial business climate;
- Well-educated pool of workers; and
- Advantageous geographic location at the heart of the large and growing Southern California market.

ORANGE COUNTY'S UNEMPLOYMENT IS LOWERING

Orange County's unemployment rate **fell to 4.9% in May 2014**

This is the lowest recorded since it hit a peak of 10% in 2010.

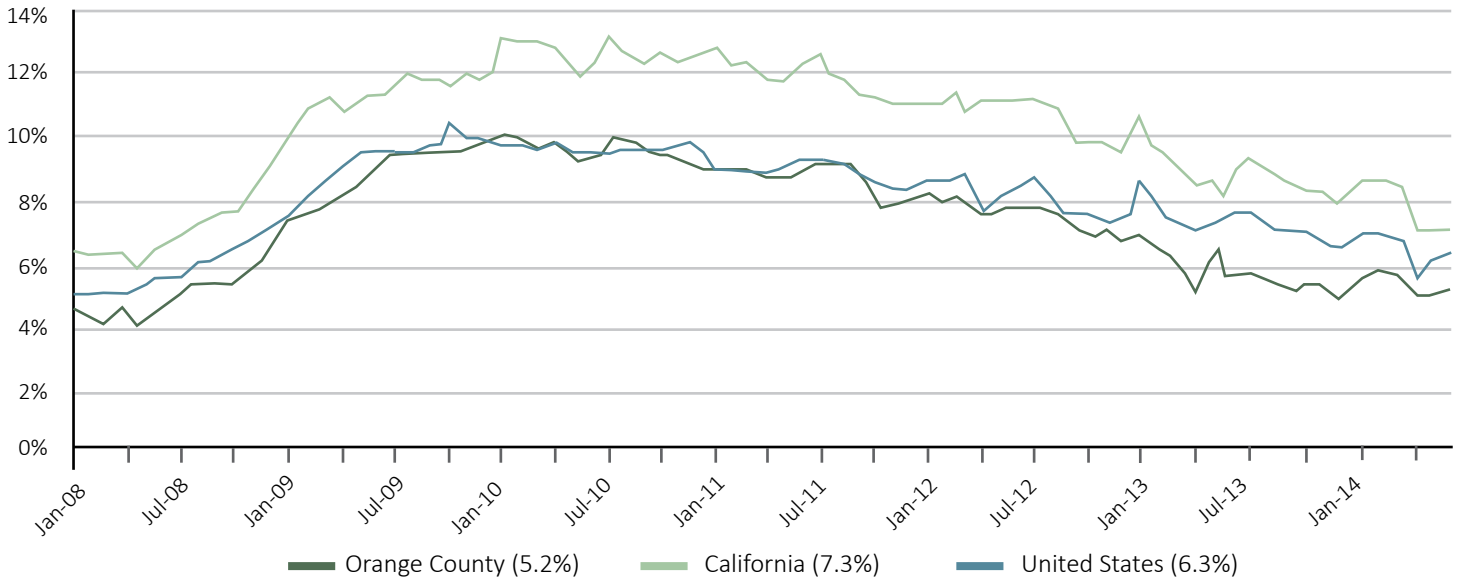


HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Orange County's unemployment peaked at 10 percent in January 2010. However, 110,000 new private sector jobs were created since then, contributing to significant advances toward economic recovery. A significant amount of jobs lost in the recession are being recovered, with unemployment falling to 4.9 percent in May 2014 (the lowest unemployment rate recorded in Orange County since June 2008) before ticking up to 5.2 percent in June 2014. Orange County's unemployment is consistently below national and state averages, as well as peer counties in California and all surrounding Southern California counties.

Job creation in the last year was spread relatively even across most sectors, with the largest gains occurring in Professional and Business Services (7,800), Construction (5,700), Tourism (5,600), and Health Care (4,500). All signs point to the likelihood that Orange County's unemployment rate will continue to remain near or below the 5 percent level for the rest of 2014.

Unemployment Rates of Orange County, California and United States, January 2008- June 2014



Source: California Employment Development Department

CLUSTER EMPLOYMENT AND SALARIES

Orange County must continue to take advantage of its regional cluster strengths and competitive advantages in order to provide a thriving climate for high-growth, high-multiplier job opportunities that can accelerate the county's global competitiveness. Information Technology (IT), Tourism, Advanced Manufacturing, and Health Care are all key drivers of the Orange County economy and continue to generate good paying job opportunities.

WHY IS THIS AN ISSUE?

Industry clusters are defined as geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular economic sector.

Clusters typically possess four key characteristics:

- Critical mass of employment concentration — in other words, more densely than average;
- High growth rates — much higher than average growth rates in other sectors;
- High multiplier effects — not all jobs are equal in terms of their effect on other parts of the economy. For example, creating a job in an industry cluster typically creates two or three other jobs throughout the economy, such as in Advanced Manufacturing; and
- Finally, and most importantly, some key reason, or some competitive advantage for the cluster to be in Orange County, today and in the future — Disneyland Resorts and The Boeing Company are two examples of key competitive advantage in their respective clusters.

Clusters represent a self-sustaining cycle of employment, innovation, productivity, and competitive advantage in a specific industry and geographic location, eventually becoming world renowned, such as the entertainment industry in Hollywood and the wine industry in Napa Valley. Increased regional specialization in turn leads to higher demand for exports from outside the region, bringing cash back to the region from outside its borders, increasing local wealth and prosperity, and benefiting local businesses with increased resident spending. Industry drivers are emerging industries found in a majority of industry clusters (as illustrated in the Cross-Cutting Industry Highlights section, beginning on page 60), and help to drive employment growth from within those specific clusters.

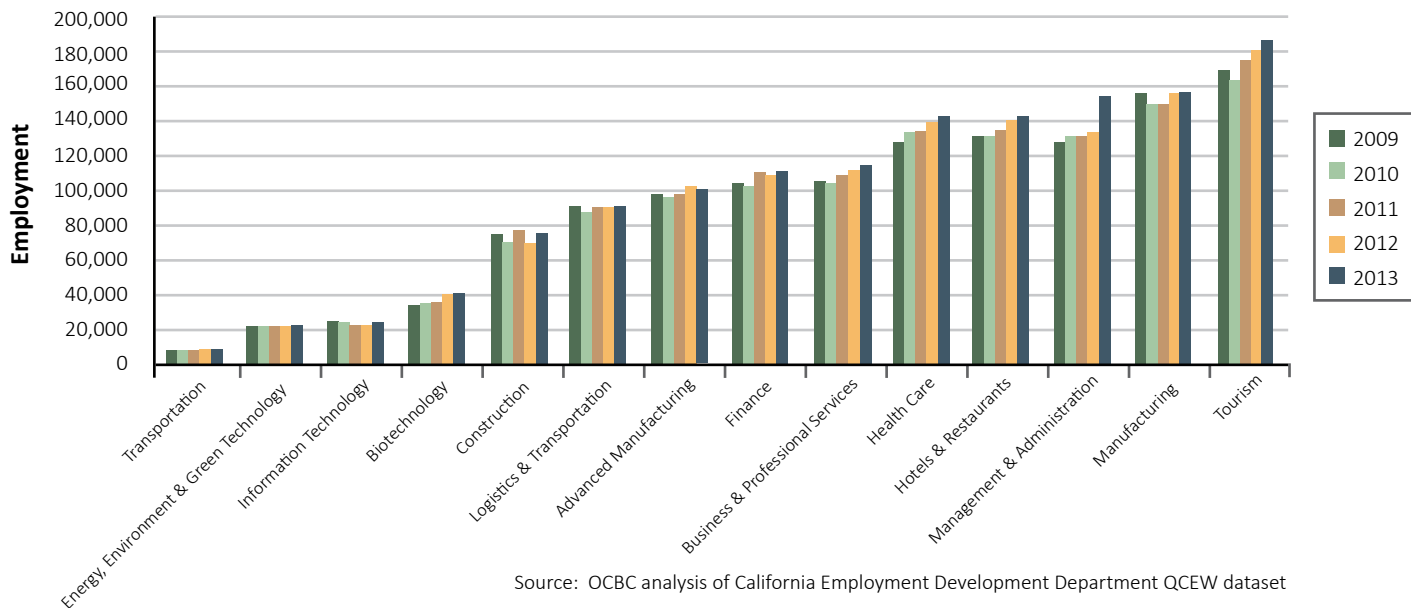
The industry clusters discussed in this section represent roughly three-fourths of all Orange County occupations and highlight the leading industry sectors that drive employment and economic activity. Clusters emerge because companies engaged in a similar industry recognize that they can elevate the playing field for their entire industry through regional specialization. This includes a capable and specialized labor pool along with reduced logistical costs.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

With an increasingly competitive global economy, it is important for Orange County to build sustainable competitive advantage around its growing and emerging industry clusters. There is increased economic activity through a virtuous cycle of innovation, new business creation, and multiplier effects by strengthening emerging industry clusters and industry drivers. The regional benefits gained by cluster formation and success include:

- Increased external business that leads to greater cash inflows for a region;
- Specialized education institutions that competently prepare students for supporting careers;
- A skilled labor pool containing cluster specific expertise;
- Reduced environmental impact through more efficient supply-side management; and
- Local growth in cluster-supporting legal, accounting, and consulting professional services that contributes to the region’s general economy.

Orange County Cluster Employment, 2009-2013



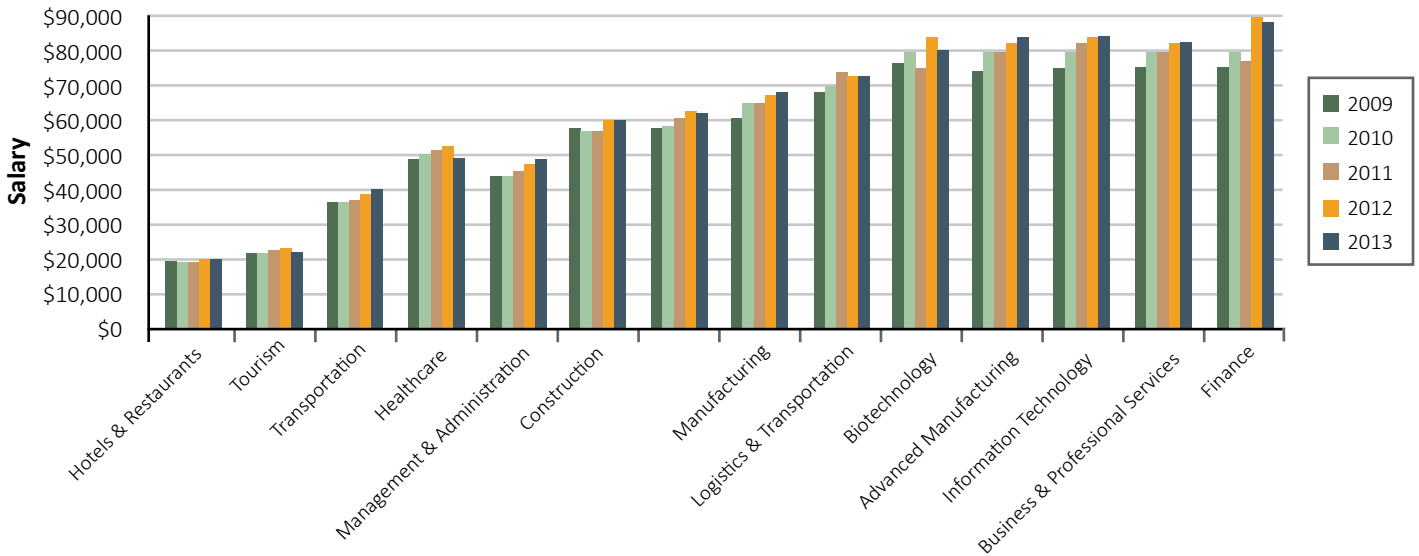
Source: OCBC analysis of California Employment Development Department QCEW dataset

Individual firms in a cluster benefit from comparative advantages associated with geographical concentrations, such as access to a common pool of specialized labor, intellectual property access within the region, and streamlined transaction and transportation costs between firms.

Overall, cluster employment conditions improved greatly across the board in 2013. Orange County is one of California’s major travel destinations, therefore, tourism remains the county’s largest cluster in terms of employment. Health care led all clusters in terms of both percent and absolute job growth, while the Construction and Management/Administration clusters also experienced significant growth in the last year.

Orange County must continue to drive even greater competitive advantage improvements in key high-multiplier tech clusters. While both sectors saw solid growth in the last year, increased future job growth in IT and Biomedical would pay dividends by maintaining and expanding the region’s competitive edge in these key industry clusters.

Orange County Cluster Salary, 2009-2013



Source: OCBC analysis of California Employment Development Department QCEW dataset

Similar to national wage trends, average cluster salary trends in Orange County were fairly stable in 2013. There were slight increases in some sectors, such as Advanced Manufacturing, offset by slight declines in other sectors such as Finance. As the economy continued to recover from the Great Recession, there is sufficient labor market supply in many sectors to meet employer demand, except in key areas exhibiting shortages due to skills gaps.

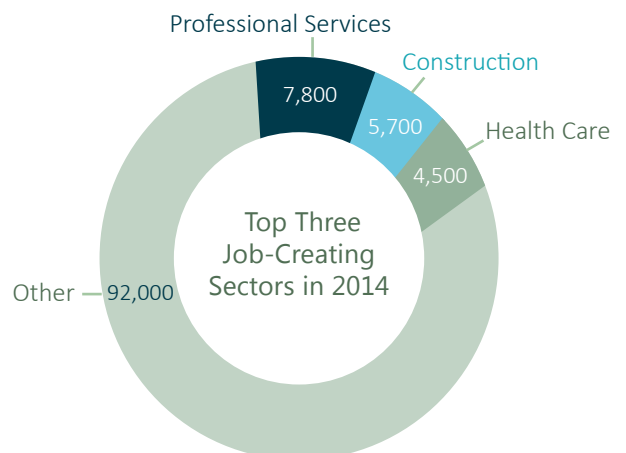
The Finance, Business and Professional Services, IT, Advanced Manufacturing, and Biotech clusters all pay average salaries of over \$80,000, which was well above the overall Orange County salary average. Average salaries in Transportation, Management/Administration, Advanced Manufacturing, and Business and Professional Services increased slightly in 2013, with other clusters experiencing slight declines.

OCCUPATIONAL GROWTH TRENDS

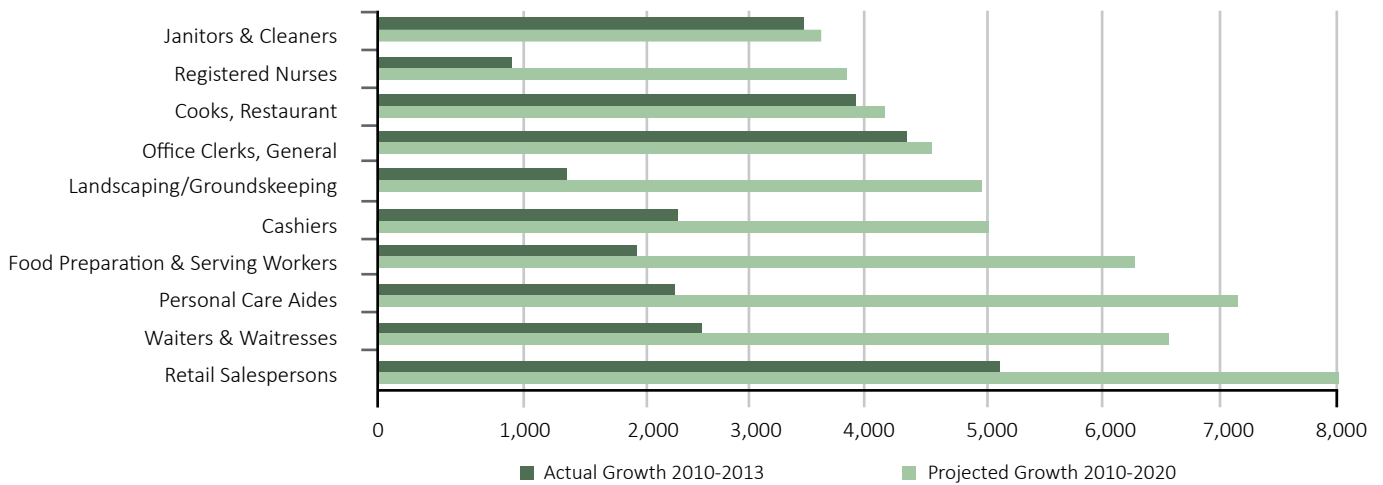
Concentrating education, workforce and economic development programs to support job creation arising in key industry clusters will help accelerate employment growth and provide Orange County with a greater presence of high-growth, high-multiplier occupations, further driving the county's continued economic recovery. Sustained economic growth in Orange County's key and emerging industry clusters creates new job opportunities, robust career ladders, and productive occupational pathways for job seekers.

WHY IS THIS AN ISSUE?

Although the Great Recession caused significant layoffs in many of Orange County's high-wage occupations, there is significant progress in increasing job availability and lowering unemployment. A fair share of employment growth, however, came at the lower end of the wage scale, including part-time positions. As a result, the economy's continued growth means Orange County must continue to attract and create higher-wage occupations to meet the demands of emerging roles. High-wage occupations play a significant role in the ability to maintain economic vitality and a high quality of life, attributes that have historically attracted thriving corporations, a skilled workforce, and entrepreneurs to the region.



Top 10 Occupations by Absolute Job Growth, 2010-2020



Source: California Employment Development Department

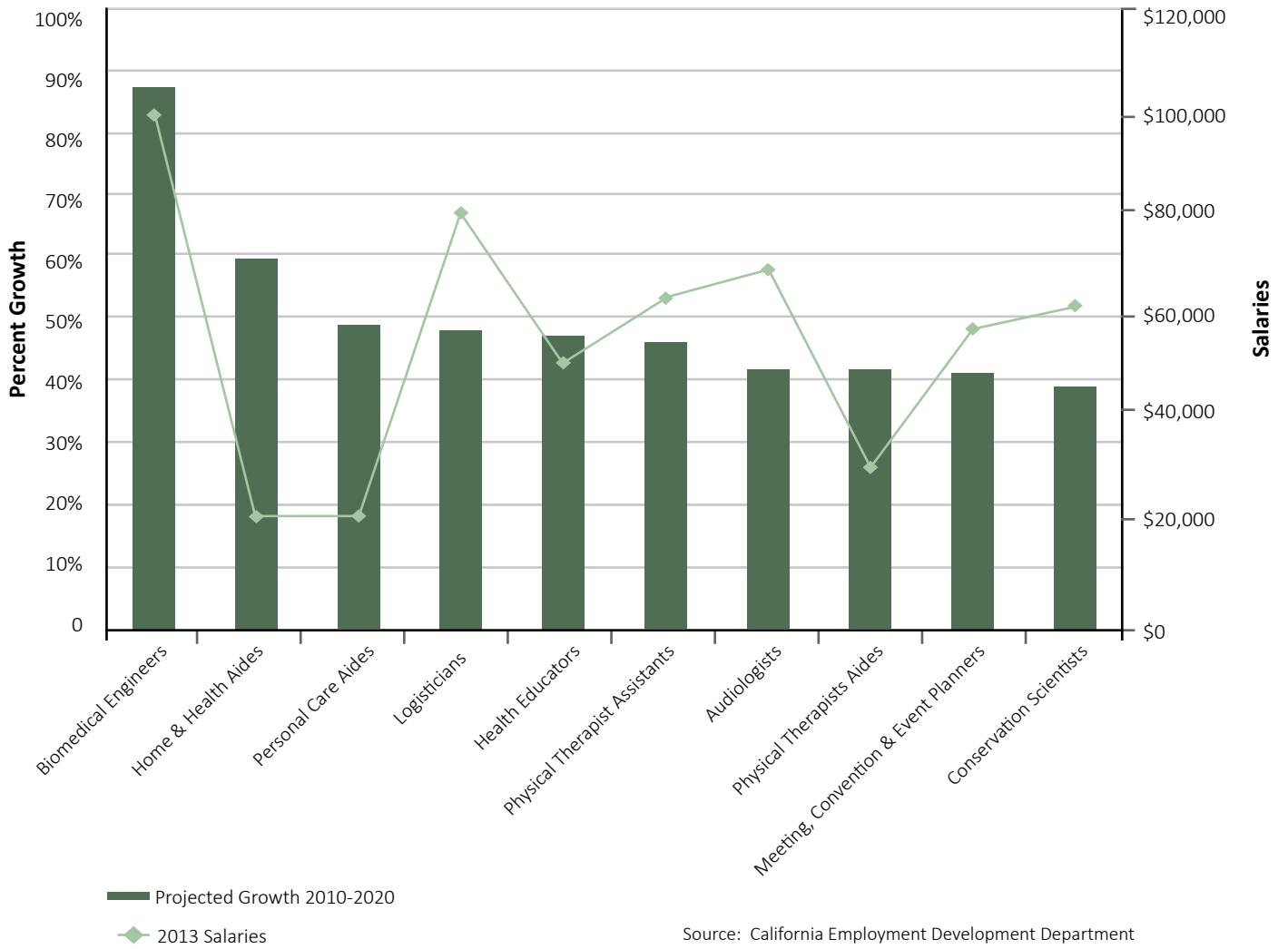
HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Looking at state projections of the fastest growing occupations in terms of sheer numbers, Orange County is on pace, or in many cases exceeds, Employment Development Department (EDD) forecasts. Janitors and Cleaners, Restaurant Cooks, Office Clerks, and Retail Salespersons already increased their employment levels by at least half of their respective EDD 2020 forecast target, and could surpass 10-year employment projections by 2015 should current growth trends hold. Service-oriented positions are the source of the majority of occupational growth, due to generating numerous entry-level positions without high educational attainment barriers. Although employment for Registered Nurses reversed last year’s dip, it is still unclear whether it will attain projected employment levels for 2020.

The fastest growing occupations in terms of percentage growth are concentrated primarily in health care oriented professions, with the Biomedical Engineer occupation projected to demonstrate by far the fastest growth rate. Occupations that have shown the most growth since 2010 are useful indicators both for identifying Orange County’s current most “in demand” occupations and providing clues as to future growth occupations worthy of talent development. These occupations represent sectors that adjusted well to the post-recovery job market, adapting and even capitalizing on Orange County’s emerging needs.

“Service-oriented positions are the source of the majority of occupational growth, thanks to generating numerous entry-level positions without high educational attainment barriers.”

Average Salaries of Fastest 2010-2020 Growing Occupations in Orange County



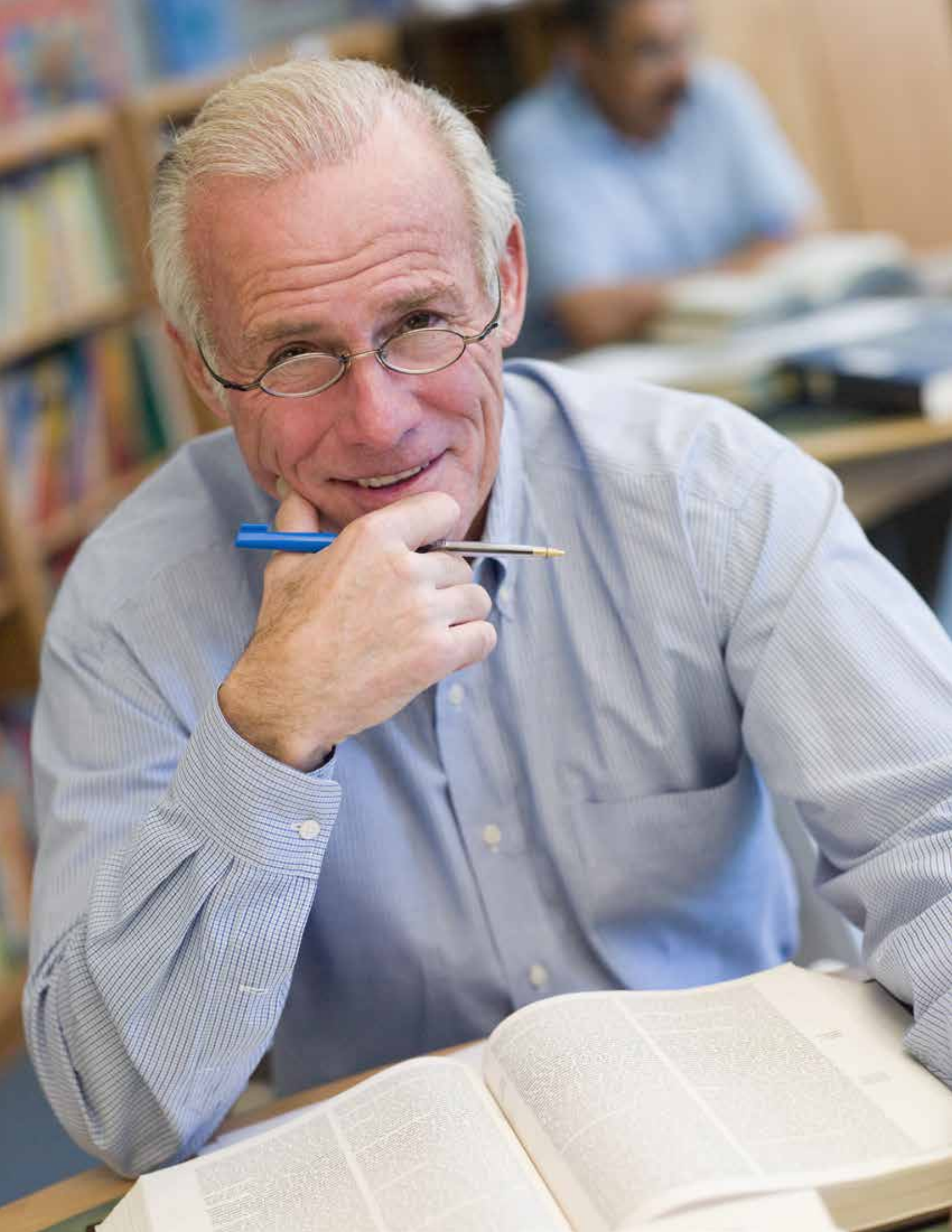
In fact, Biomedical Engineers experienced exceptional growth so far this decade, already surpassing EDD’s 10-year growth forecast before even five years have elapsed. Physical Therapist Aides and Assistants will likely both exceed state projections next year as well, with Personal Care Aides following suit shortly thereafter.

In terms of salaries, the projected fastest-growing occupations exhibit a bimodal distribution, with Biomedical Engineers, Logisticians, and Audiologists earning average salaries far above the county average, while Home Health Aides, Personal Care Aides, and Physical Therapist Aides earn lower than average salaries.

ORANGE COUNTY IS AN ECONOMIC LEADER

Orange County is on pace, *and in many cases is exceeding,* EDD job creation forecasts.





EDUCATION AND WORKFORCE TRAINING TRENDS

In order for Orange County to maintain its highly-skilled, educated workforce as a major competitive advantage driving economic success, education and workforce policies and programs must continue to increase community college and university level educational attainment and career readiness.

EDUCATION AND WORKFORCE TRAINING TRENDS



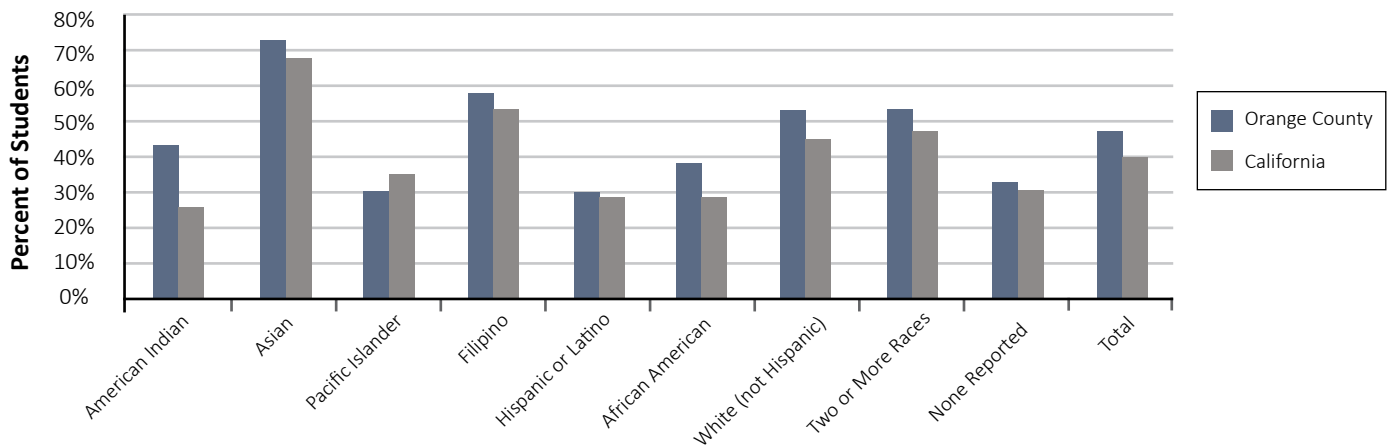
COLLEGE ELIGIBILITY

WHY IS THIS AN ISSUE?

Orange County's ability to nurture emerging industry sectors, attract high-wage occupations, increase overall earning potential, and drive innovation forward is directly tied to the educational attainment of its workforce. The availability of a diverse, well-educated pool of individuals in the Orange County labor market provides a competitive advantage in specialized industries and is crucial to supporting broad economic development across the county.

Key programs and policies should focus on increasing college and university-level educational attainment, especially in STEM-related fields, as well as support for adult retraining to align skills with in-demand labor needs in growing Orange County industry clusters. Doing so will provide industries with a localized competitive advantage for establishing and maintaining their operations in Orange County, which in turn promotes continued economic development and compelling employment opportunities for new graduates.

UC/CSU Eligible Orange County and California Graduates, 2013



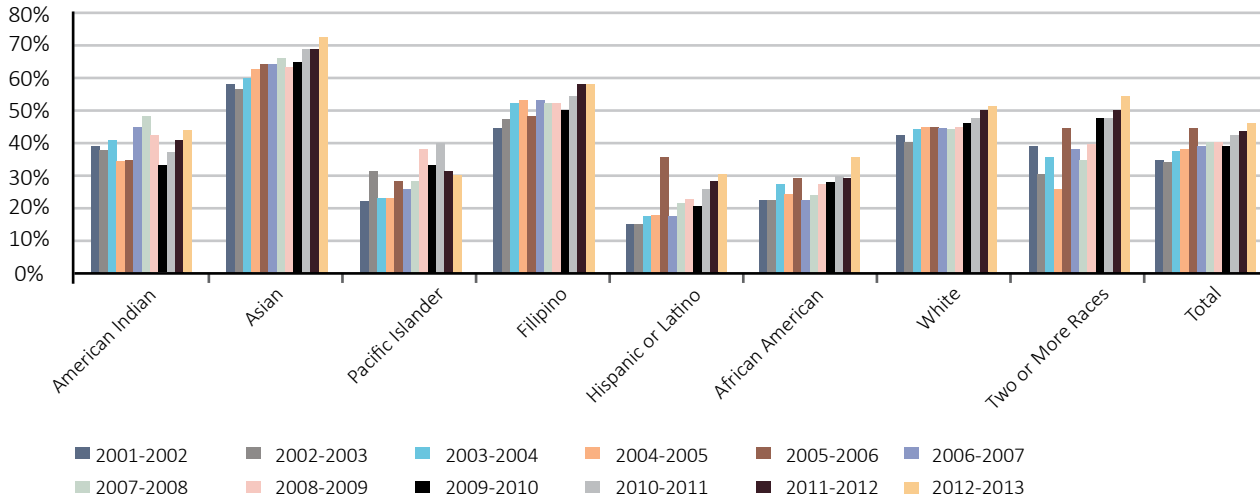
Source: California Department of Education, Educational Demographics Unit

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Of Orange County high school graduating seniors, 46.6 percent were eligible for entry into the UC/CSU university systems in 2013 — a 3.3 percent improvement over the previous year and a significant 8.3 percent improvement compared to 2010.

Asian students continue to achieve the highest levels of eligibility with a 10-year high of 73.5 percent eligibility. Except for Pacific Islanders, all ethnic groups saw an increase in eligibility rates since the 2012 school year. While African American eligibility has noticeably improved in Orange County from the previous year (growing by 6.4 percent to a total rate of 36.1 percent), Latino student eligibility rates continue to under perform. Despite this trend, significant efforts to address these low rates have clearly had a beneficial impact on Latino educational attainment. Latinos experienced a 10 percent increase in college eligibility compared to 2010.

UC/CSU Eligible Graduates by Ethnicity, 2002-2013



Source: California Department of Education, Educational Demographics Unit

API, SAT, AND HIGH SCHOOL EXIT EXAM PERFORMANCE

Educational achievement gaps between Orange County school districts must be addressed in order to ensure all students receive a quality education. Orange County will be able to maintain its competitive advantage by both assisting under performing districts with college preparation and supporting high-performing districts with expanded opportunities for enriching the education pipeline.

WHY IS THIS AN ISSUE?

Orange County’s academic performance experienced steady improvement over the past decade. Although not all schools have shown improvements, the majority of Orange County’s school districts saw sustained success throughout the current decade. The Academic Performance Index (API), Scholastic Assessment Test (SAT), and the High School Exit Exam provide measures of student performance and help decision-makers assess possible shortfalls in the educational system, and identify school districts that require additional attention.

Measures of academic performance also provide employers with broad indicators of workforce readiness. Continued strong performance on academic tests encourages Orange County employers to recruit locally, leading to job opportunities for the local workforce.

46.6%
 Graduating high school seniors eligible for entry into the UC/CSU university systems in 2013.

3.3%
 Improvement from previous year.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Across API, SAT and High School Exit Exams, Orange County performs well compared to peer regions, the state, and the nation. Although efforts to improve poorly performing school districts have begun to enhance overall performance, achievement gaps between school districts remain significant, with large gaps between high and low performing schools. Orange County must continue to implement programs and policies that focus on improving educational attainment, particularly among English language learners and economically disadvantaged populations. Narrowing this performance gap is essential to improving the school system's ability to adequately prepare students for the future.

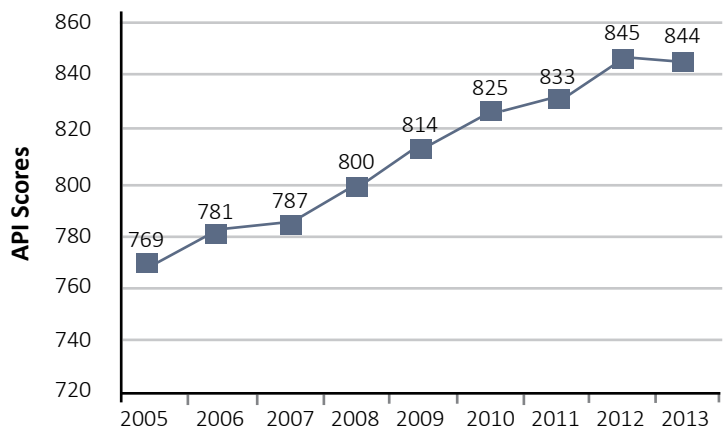
Programs and policies should not only aim to enhance educational performance in under performing districts, but also ensure that graduating students are adequately prepared to pursue advanced degrees. Doing so will effectively improve Orange County's future workforce and demonstrate its competitive strengths to national and international audiences, attracting new high-skilled workers and high-growth, high-wage businesses to the region.

ACADEMIC PERFORMANCE INDEX

The Academic Performance Index (API) measures the academic performance of individual schools based on the results of statewide testing. The API uses an improvement measurement model, comparing API results from the previous year and the current year to determine annual growth.

Although Orange County's API results steadily improved since 2005, the trend declined slightly in 2013. The average API score was 844 in 2013, which is a substantial increase compared to 2005's 769 average API score. Individual school districts demonstrated mixed 2013 results. While 23 of the measured 28 school districts exceeded the statewide performance target (800) in 2013, only nine out of 28 districts improved their API scores in the last year. Anaheim Union High and Santa Ana Unified School Districts are two critical districts that have yet to reach the API statewide standard, with scores of 777 and 743, respectively.

Orange County Average API Scores, All Districts, 2005-2013



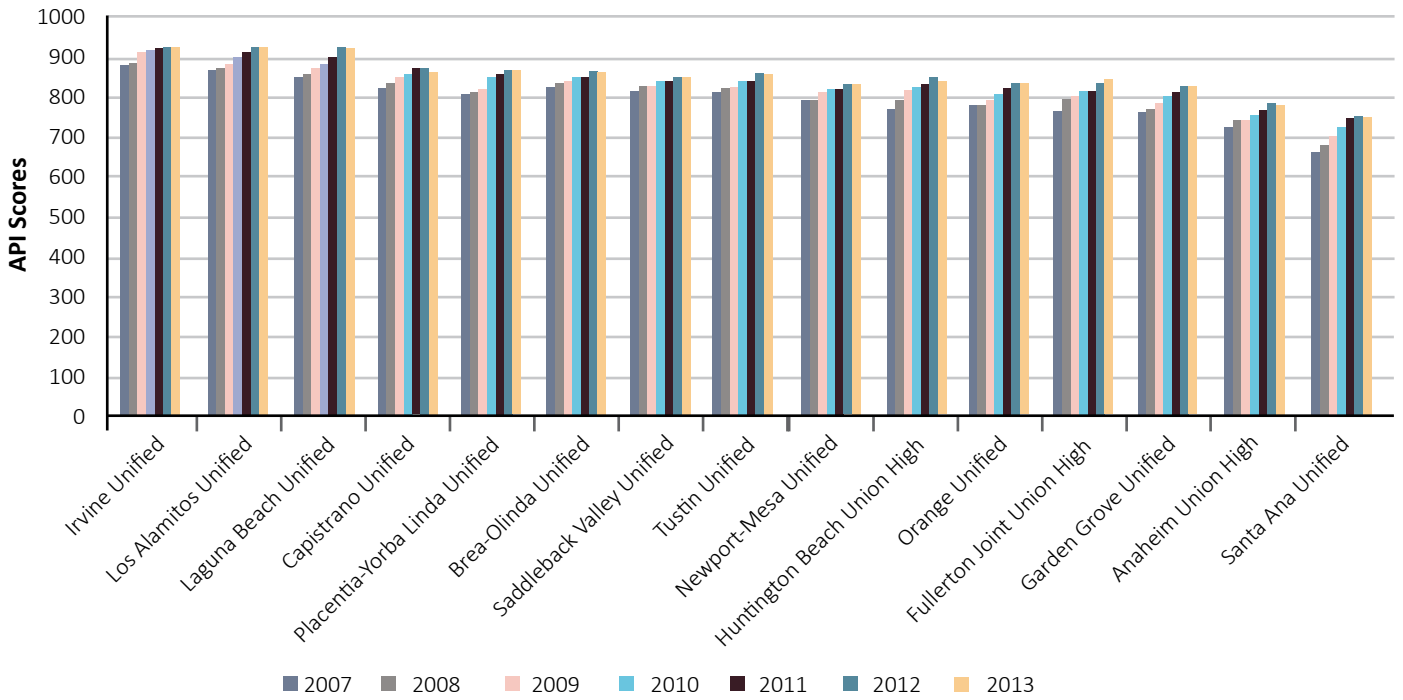
Source: California Department of Education, Educational Demographics Unit

ORANGE COUNTY'S API SCORES ARE RISING

The average API score was 844 in 2013, which is a substantial increase compared to 2005's average of 769.



Orange County Average API Scores by District, 2007-2013



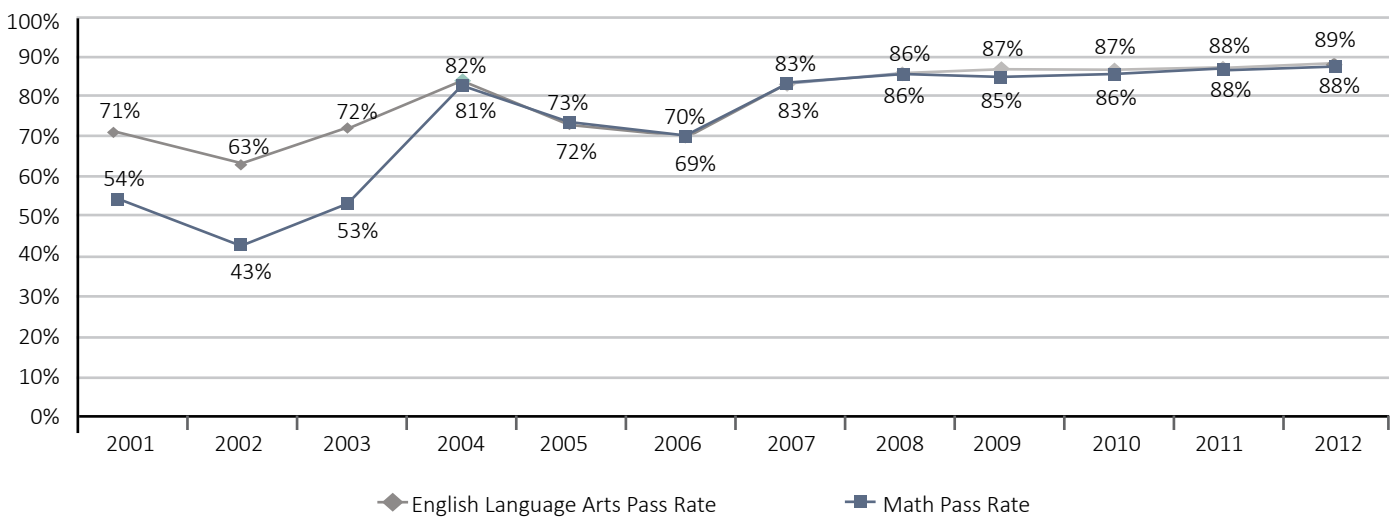
Source: California Department Of Education, Educational Demographics Unit

HIGH SCHOOL EXIT EXAM PERFORMANCE

Exit exams provide another barometer for measuring cumulative student achievement. Orange County’s high school students had an exam pass rate of 89 percent for Mathematics and 88 percent for English Language Arts. This is the highest pass rate yet for both subjects, and exceeds the state level pass rates of 84 and 83 percent respectively.

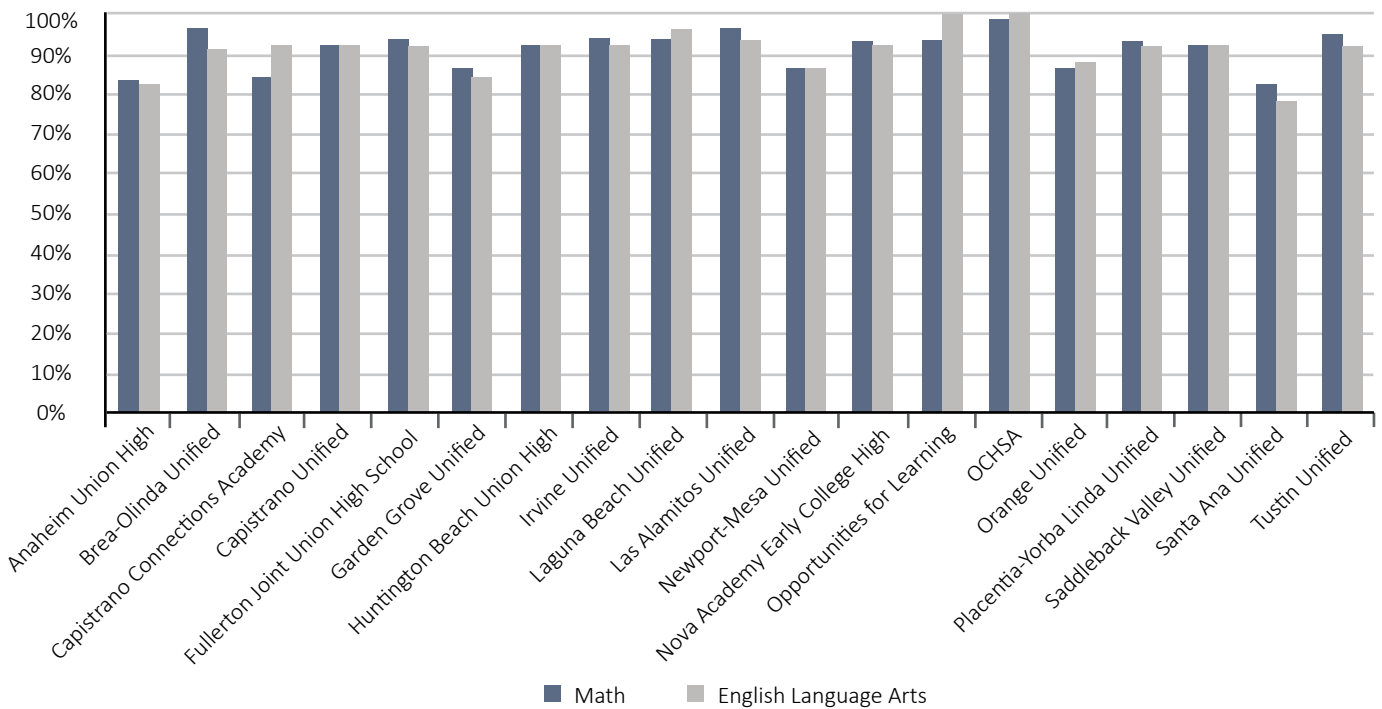
While pass rates for Santa Ana and other regions have increased in recent years, they are still slightly below average county rates as well as those of neighboring school districts. At the district level, only three districts are performing below the state average for English language: Anaheim Union High, Santa Ana Unified and Nova Academy Early College High, and only Santa Ana Unified School District’s math pass rates are below the state average.

Orange County Grade 10 High School Exit Exam Trend, 2001-2012



Source: California Department Of Education, Educational Demographics Unit

Grade 10 High School Exit Exam Pass Rate by District, 2011-2012



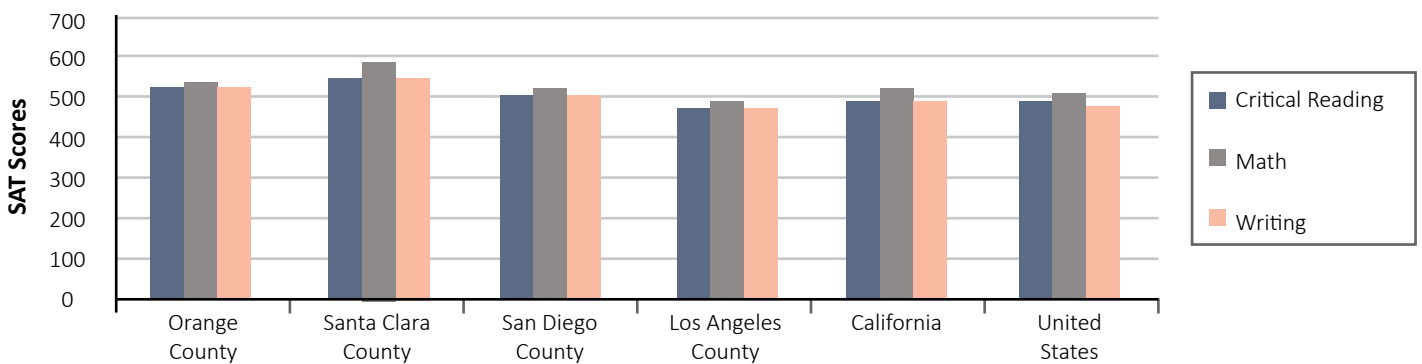
Source: California Department Of Education, Educational Demographics Unit

SAT PERFORMANCE

SAT performance has declined across California for the last two years, with most regions averaging a 20-point drop in cumulative score since 2011. Orange County declined from an overall average of 1,597 in 2012 to 1,588 in 2013. Despite declining scores, the county continues to compare well, with a cumulative average reaching nearly 100 points above the state and national averages. In terms of peer regions, only Santa Clara County is outperforming Orange County's SAT performance, with an average SAT score of 1,681.

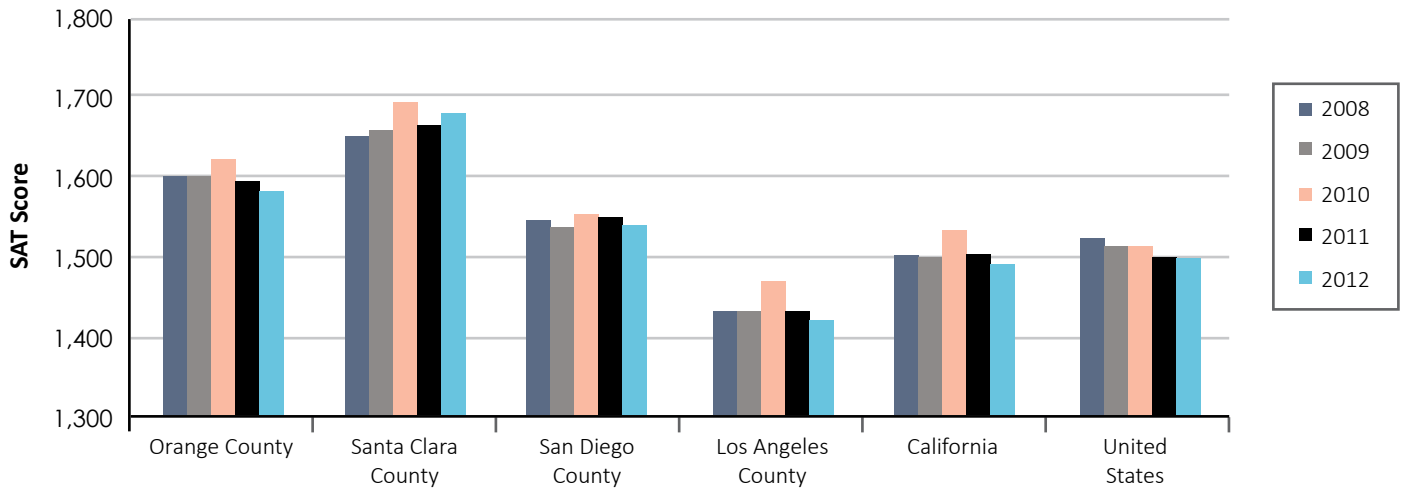
Santa Clara County was also the only comparison region that increased SAT averages over the past year. With SAT scores trending down in the majority of the U.S. and its regions. Orange County will need to buck the trend and join Santa Clara County in growing SAT scores in order to help students prepare for future success.

2012 Regional SAT Scores by Subject



Source: California Department of Education, Educational Demographics Unit

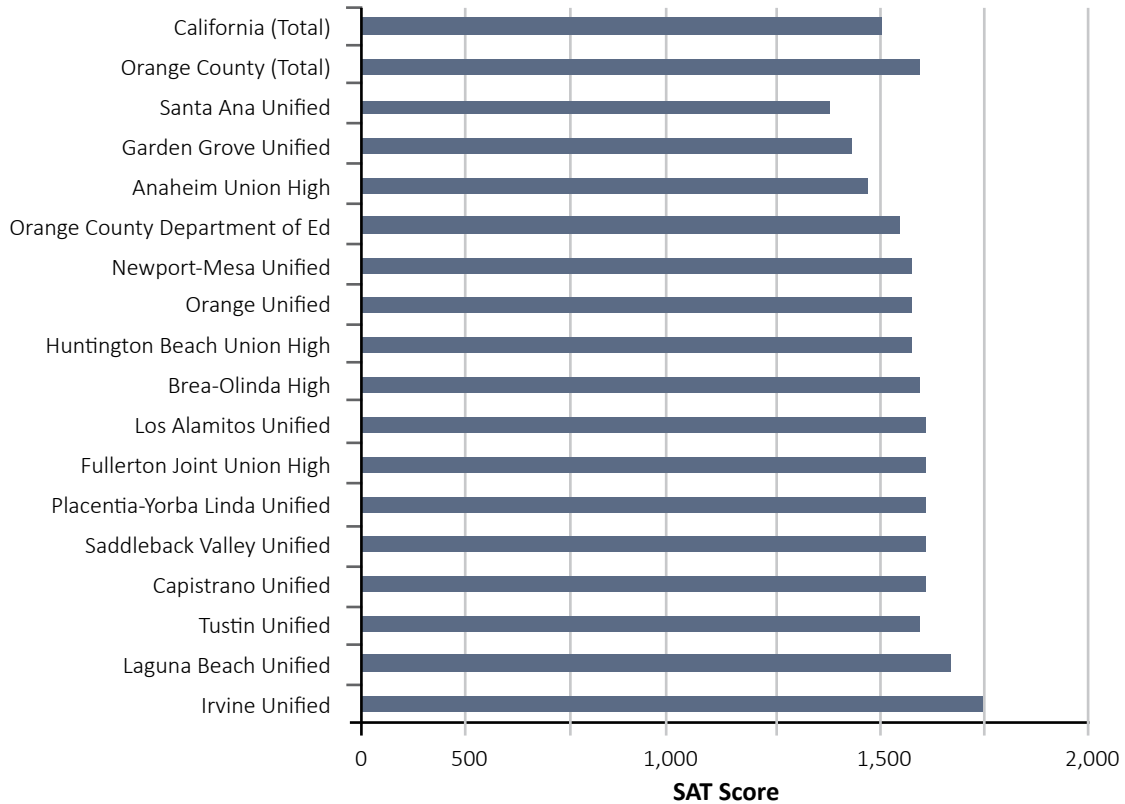
Regional SAT Scores, 2008-2012



Source: California Department of Education, Educational Demographics Unit

Orange County features some of the best-scoring districts in the state on the SAT, but there is also great variation within the county. Irvine Unified had the highest overall SAT scores with an average of 1,820, followed by Laguna Beach Unified at 1,707. Performance changes since the previous year are mixed. Irvine Unified improved its average by nine points, while Laguna Beach Unified’s average fell by seven points. Only Anaheim Union High, Garden Grove Unified and Santa Ana Unified underperformed compared to the state average.

Average Total SAT Scores by District, 2012



Source: California Department of Education, Educational Demographics Unit

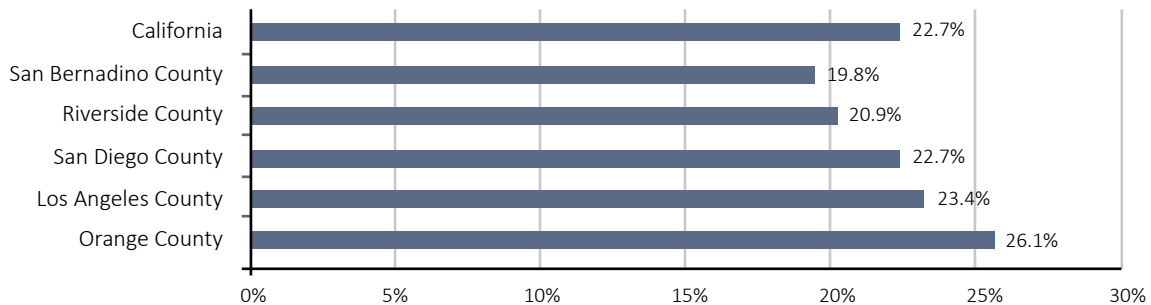
ENGLISH LEARNERS

With Orange County's increasing diversity and status as a multicultural hub of Southern California, English fluency instruction in Orange County must improve rapidly so students can achieve greater educational outcomes, attain opportunities in higher learning, and become well-prepared to communicate effectively in the workplace.

WHY IS THIS AN ISSUE?

Language barriers pose significant hardships for students looking to obtain an education and for new entrants in the labor market. Improved English comprehension and fluency enables students to grasp academic concepts more quickly and clearly, and demonstrate their comprehension of classroom material. Students who do not speak, read or write English fluently face serious limitations in current and future job markets. The county must focus on improving English fluency to ensure that its students are prepared for higher education and the workplace. Without this emphasis on English language fluency, the county will fail to provide local business with a qualified workforce, ultimately resulting in lower economic growth and job creation.

English Learners as Percent of Total Enrollment, 2013-2014



Source: California Department of Education, Educational Demographics Unit

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Over the last decade, Orange County experienced positive trends in English language fluency, or students designated as "Fluent English Proficient" (FEP). Following a slight drop in 2011, FEPs steadily rose over the past two years and almost outnumbered students designated as "English Language Learners" (ELL) in 2013.

However, 2014 saw FEPs decrease, falling by roughly 7,500 to a total of 110,114 in 2014, while ELLs proportionately increased. Orange County's percentage of ELLs enrolled in the 2013 to 2014 school year was 26.1 percent, the highest among neighboring counties and the state as a whole. This represents a notable 1.5 percent increase since the previous year and made Orange County's ratio of ELLs over 2 percent greater than the nearest comparison region of Los Angeles County, and over 3 percent higher than the state average. This indicates the need for continued emphasis regarding English language programs.

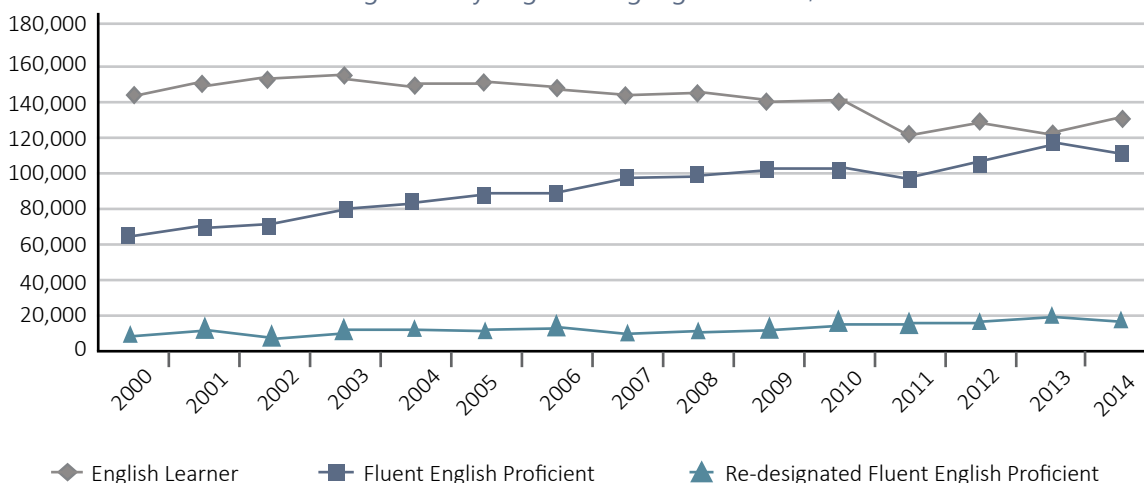
RATES OF ENGLISH LEARNERS ARE RISING

In OC, there were 26.1% of ELLs enrolled during the 2013 to 2014 school year.

This is the highest among neighboring counties and the state as a whole.



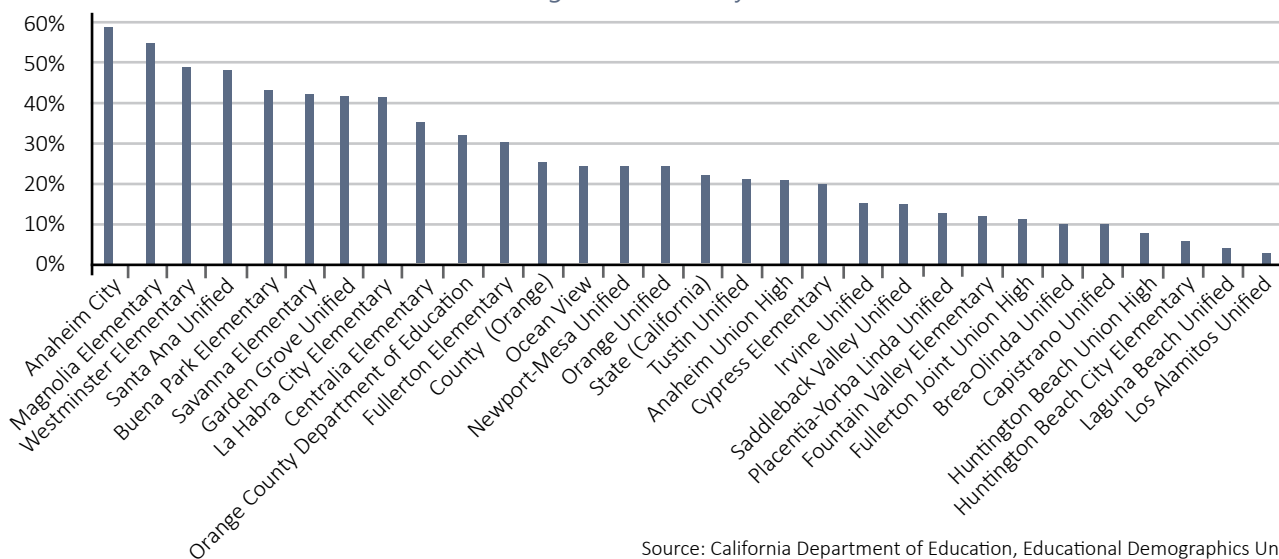
Orange County English Language Learners, 2000-2014



Source: California Department of Education, Educational Demographics Unit

Among primary school districts, Anaheim City School District had the highest rate, with 58.3 percent of its total enrollment designated as ELLs, followed closely by Magnolia and Westminster Elementary. For secondary school districts, Santa Ana Unified and Garden Grove Unified contained the highest proportion of language learners, both significantly higher than the county average.

Percent of English Learners by District, 2013-2014



Source: California Department of Education, Educational Demographics Unit

SUPPLEMENTAL INFORMATION

English Language Learner students are those who reported a primary language other than English on the state-approved Home Language Survey and who – on the basis of the state approved oral language (Kindergarten to 12th grades) assessment procedures including literacy for third through 12th grades— have been determined to lack the clearly defined English language skills of listening comprehension, speaking, reading and writing necessary to succeed in a given school’s regular instructional programs.

Fluent English Proficient (FEP) students are those who reported a primary language other than English, but met the district criteria for determining proficiency in English – i.e., those students who were identified as FEP on initial identification and students re-designated from Limited-English-Proficient (LEP) or English Language Learner (ELL) to FEP.

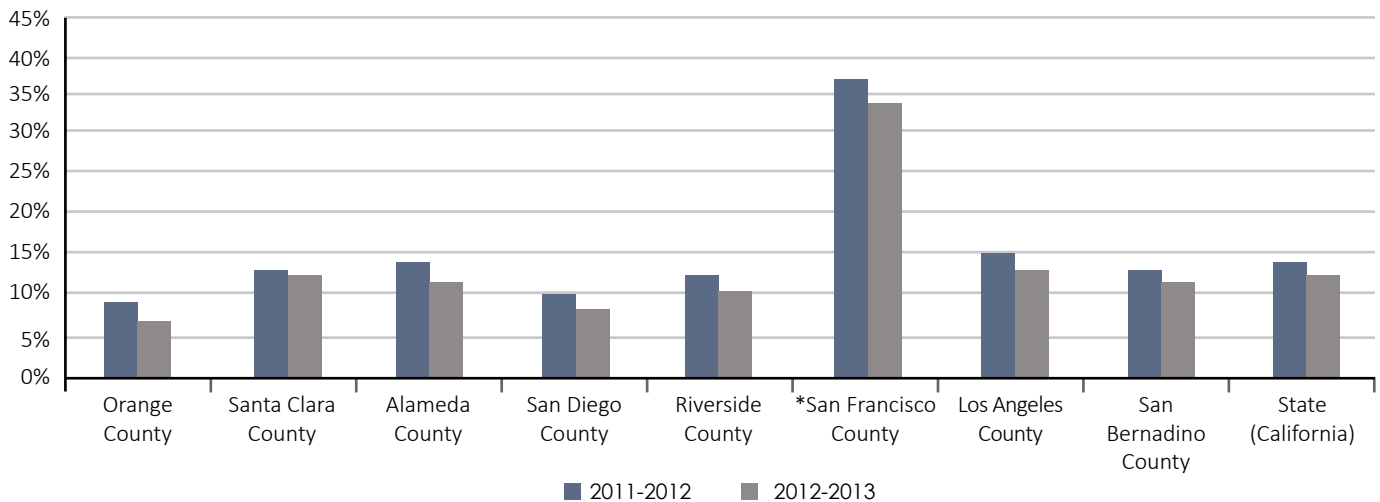
DROPOUT RATES

Improving Orange County’s high school dropout rates is a key indicator of success in building a better-educated, better-prepared workforce for the future.

WHY IS THIS AN ISSUE?

While Orange County continues to enjoy the benefits of maintaining low overall student dropout rates, too many students continue to drop out of high school. Dropout occurs for many reasons, the most prevalent of which is a loss in overall academic motivation without realizing the substantial life-altering benefits associated with higher education. Many Orange County schools are recognized as being among the best in the state and have developed an academic culture to encourage their students to stay in school. However, the region must take additional responsibility for under performing schools to focus on programs aimed at communicating the importance of education.

Grades 9-12 Adjusted Four-Year Dropouts by County



Source: California Department of Education, Educational Demographics Unit

* San Francisco County increases due to five key school district adult rehabilitation centers being included in dropout totals. Excluding these outliers, San Francisco Unified School District’s dropout rate was 10.1 percent between 2011 and 2012, and 9 percent between 2012 and 2013.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Compared to the state and neighboring counties, Orange County had the lowest dropout rate in 2013 at 7.3 percent; this is a substantial 1.6 percent improvement in the last year, but still represents 3,049 Orange County students dropping out in the 2012 to 2013 school year. The next closest counties were San Diego County (9.2 percent) and Riverside County (10.1 percent). While overall dropout rate has fallen into single digits, dropout rates continue to be significantly higher for some populations, including English Learners, the socioeconomically disadvantaged, and some ethnic communities.

STUDENTS DROP OUT FOR MANY REASONS



The loss of overall academic motivation without recognizing substantial benefits is the most prevalent reason for higher education dropouts.

STEM RELATED DEGREES

The majority of future high-paying job opportunities will be clustered around the STEM disciplines (Science, Technology, Engineering and Math) on production and ingenuity in high-tech industries. STEM businesses and related knowledge-based high-tech clusters are projected to grow more rapidly than the overall economy and generate additional job creation in other sectors due to multiplier effects. Ensuring robust and comprehensive STEM education is a crucial first step in improving Orange County's overall business competitiveness and economic health.

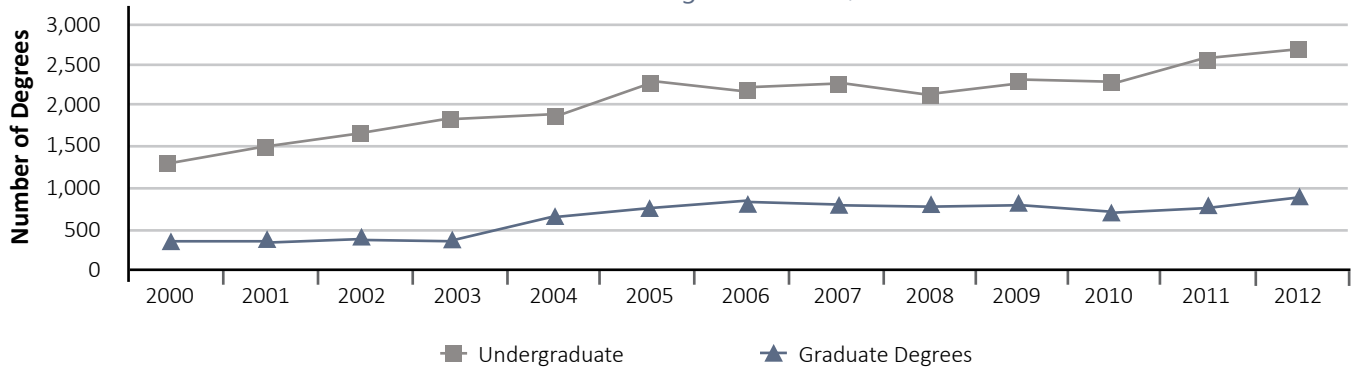
WHY IS THIS AN ISSUE?

Orange County has a long history of science and technology-based business, beginning with the prominent defense and aerospace companies that emerged to take advantage of the county's educated workforce in the 1960s and 1970s. Today, many of Orange County's most prominent high-growth industry clusters revolve around biomedical technology, software development, computer gaming, consumer electronics, and electronic component manufacturing. With increasing global competition, keeping Orange County's competitive edge in the STEM disciplines is more important than ever. Please see the special feature focusing on STEM for an in-depth review of this topic.

Orange County Population Projections

DISCIPLINE	2012		2004-2012 PERCENT CHANGE	
	BACHELOR'S DEGREES GRANTED	GRADUATE DEGREES GRANTED	BACHELOR'S DEGREE CHANGE	GRADUATE DEGREE CHANGE
Biological Sciences	1,205	84	71.7	190.4
Engineering	645	371	40.5	45.1
Information & Computer Sciences	297	257	-44.7	204.6
Physical Science	315	149	133.4	-1.7
Math	171	81	76.4	146.8
Total	2,633	942	36.4	70.2

Tech-Related Degrees Granted, 2000-2012



Source: California State University, Fullerton, Chapman University, and University of California, Irvine

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Following a slight drop in 2008, the number of STEM-related undergraduate degrees awarded by Orange County increased over the past two years, with an 8.5 percent increase in 2009 and a 7 percent increase in 2010. Since 2004, the STEM majors with the highest growth are Physical Sciences and Biological Sciences, with 133 percent and 72 percent growth respectively. Among graduate degrees, all but Physical Science saw substantial year-over-year growth, leading to an 18 percent overall increase in STEM-related graduate degrees awarded from 2011 to 2012.

While STEM degrees amounted to roughly 20 percent of all Orange County degrees awarded in the last year, employer demand for STEM-related talent is also substantially increasing. Orange County's education and workforce training institutions must continue building STEM capacity to keep pace with accelerating demand for critical positions within STEM-related industries and occupations.



SKILLS GAP: WHAT DOES IT MEAN FOR OC?



WHY IS THIS AN ISSUE?

Talented workers are at the heart of a company's economic success and key drivers for broader economic prosperity. Moreover, skilled workers command higher wages, plus enjoy greater potential for upward economic mobility than their less-skilled counterparts. This special feature assesses the scope of the skills gap issue in Orange County and provides context as to what would be gained by closing the skills gap. With robust and relevant training programs that truly develop the skills and abilities demanded by the labor market, young adults, recent grads, and mid-career job seekers can "bridge the skills gap" by entering the job market in meaningful ways and build sustainable careers.

DEFINING THE SKILLS GAP

What exactly is the "skills gap?" While definitions vary widely, with different schools of thought approaching the issue in drastically different ways, the "skills gap" concept is not new. For over a decade, employers reported a lack of trained job candidates to fill open positions. This is a primary, ongoing source of frustration and dissatisfaction with the skill-sets of incoming workers. The skills gap question brings up areas of stark contrasts and difficult paradoxes. While we may not know the causes, we certainly see the real-world effects reported by employers:

- While more than 11 million Americans are unemployed and millions more are underemployed or have dropped out of the workforce, employers routinely report they cannot find the skilled workers they need;
- Nearly 30 percent of people under 25 are either underemployed, unemployed, or have simply dropped out of the labor force due to discouragement;
- 49 percent of employers struggle to fill jobs with qualified job seekers;
- 39 percent of United States employers in the U.S. have difficulty filling jobs according to Manpower's 2013 survey;
- An even higher percentage of HR managers (45 percent) reported that they cannot find qualified candidates to fill open positions;
- 45 percent of United States employers say lack of skills is the "main reason" for entry level vacancies; and
- While 72 percent of educational institutions believe recent graduates are ready for work, only 42 percent of employers agree.

What is "Skills Gap?"



Jobs that employers are currently looking to fill



Employees available with the skills to fill those jobs



“ For over a decade, employers reported a lack of trained job candidates to fill open positions. ”

While a formal accepted methodology for quantifying a “skills gap” does not yet exist, there is an emerging body of research exploring the extent of, and ramifications of, the skills gap at the national level. For example, ACT, an independent education and workforce development think tank most known for college entrance testing, conducted research in 2013 to assess skills gap mismatch at the national level, and concluded that:

- Significant foundational skills gaps exist for United States workers and job seekers, possessing both middle and high levels of education, compared to jobs requiring a similar level of education;
- For manufacturing, health care, construction and energy-related target occupations requiring a middle or high level of education, the majority of workers studied were not able to demonstrate the required skill level for locating information (ability to locate, synthesize, and use information from workplace graphics such as charts, graphs, tables, flowcharts, diagrams, maps, etc.) gauges;
- Less than half of United States workers examined with a middle or high education level met the Applied Mathematics skill requirements for the majority of manufacturing, construction, and energy jobs; and
- Level of education does not necessarily relate to gaps in foundational on-the-job skills. In fact, it seems that the gap in foundational skills demanded by employers widens as the level of education increases.

While research shows a skills gap occurring in many industry sectors, analysis points to particular industry clusters and occupations in which it is particularly acute. The following section examines the skills gap issue from the perspective of industry clusters demonstrating evidence of current skills gap in the Orange County labor market.

OPPORTUNITY: NARROWING THE SKILLS GAP IN ORANGE COUNTY BY DATA-DRIVEN ANALYSIS

Today’s labor market is complex and driven by technology and global trends. A lack of real-time knowledge about which segments of the labor market are facing a skills gap prevents many job seekers from finding their best industry/occupational “fit” for their unique combination of skills, knowledge, and abilities that:

- Currently demonstrate good-paying “in-demand” entry-level job openings with additional projected future job creation in the Orange County labor market;
- Are a good “fit” for the skills, knowledge, and abilities of current job seekers, requiring at most short/intermediate term education and workforce training certifications; and
- Demonstrate clear career pathway advancement opportunities from entry-level positions to higher paying, higher skilled occupations.

Using historical, real-time, and projected data gleaned from a combination of the California Employment Development Department, the United States Department of Labor, the Bureau of Labor Statistics and the Conference Board’s Help Wanted OnLine (HWOL — a database that measures the current number of new, first-time online jobs and jobs reposted from the previous month from over 16,000 Internet job boards, corporate boards and smaller job sites), analysis pointed to three Orange County industry clusters exhibiting current and projected “in-demand” labor market trends:

- Information Technology;
- Advanced Manufacturing; and
- Health Care

All three exhibit multiple characteristics suggesting current and projected skills gaps and “in-demand” job opportunities, such as:

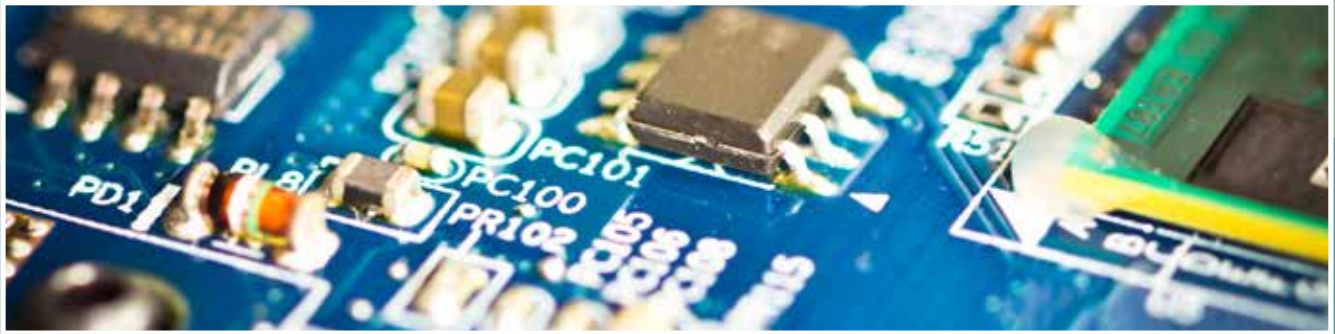
- The most number of occupations with over 100 current openings;
- Recent growth rates much higher than state projects; and
- A significant percentage of total occupations that have open positions/available jobs.



SECTOR SPOTLIGHTS:
ADVANCED MANUFACTURING,
HEALTH CARE, AND
INFORMATION TECHNOLOGY

Advanced Manufacturing, Health Care, and Information Technology are three critical areas to focus Orange County's education and workforce training efforts as they provide clear paths forward to strengthening regional economic competitiveness.

SECTOR SPOTLIGHTS: ADVANCED MANUFACTURING, HEALTH CARE, AND INFORMATION TECHNOLOGY



WHY IS THIS AN ISSUE?

Combined, these three clusters generate large numbers of job opportunities at all levels of the educational attainment spectrum, from entry-level to executive positions. They also consist of leading Orange County employers that are actively hiring monthly, and generating job creation well ahead of state employment projections.

ADVANCED MANUFACTURING

KEY INDUSTRY TRENDS

There are 15 occupations with over 100 current openings, totaling 4,651 positions. Of those 15 occupations, the following 13 exhibit high labor market demand metrics.

Average Salary of Open Positions: \$64,607

Top OC Cities - Advanced Manufacturing Percentage Employment			
Irvine	21.7%	Lake Forest	4.1%
Anaheim	13%	Buena Park	3.7%
Santa Ana	10.6%	Fullerton	3.5%
Huntington Beach	7.8%	Costa Mesa	3.3%
Orange	4.2%	Brea	3.2%
Garden Grove	4.1%	Tustin	2.2%

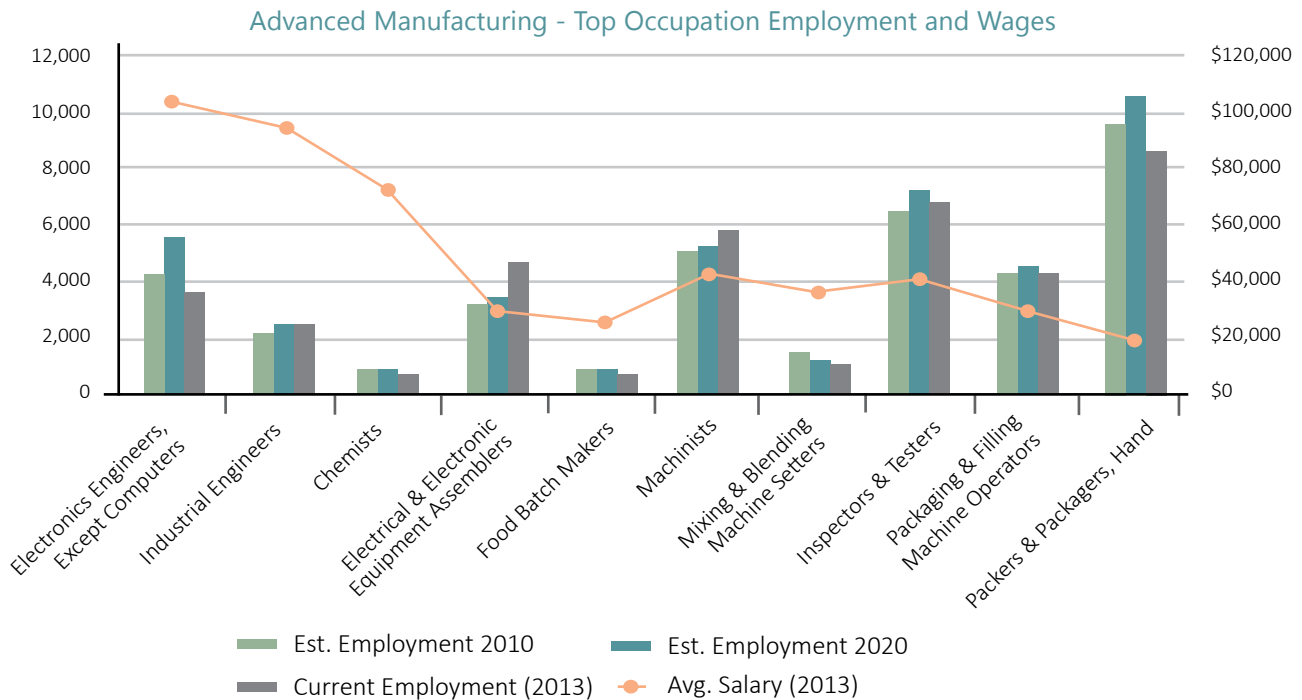
Current "In Demand" Occupations- Entry Level	Openings	Average Salary
Maintenance/Repair Workers	370	\$39,501
Stock Clerks	279	\$26,479
Product Demonstrators/Promoters	269	\$30,860
Machinists	117	\$40,404

Current "In Demand" Occupations Move up/Higher Level	Openings	Average Salary
Sales Reps, Manufacturing	651	\$64,886
Industrial Engineers	646	\$98,157
First-Line Production Supervisors	435	\$57,511
Operations Managers	334	\$131,998
Sales Reps, Scientific & Technical Products	295	\$131,998
Sales Rep Managers	260	\$72,465
Electrical Engineers	258	\$108,092
Mechanical Engineers	232	\$96,932
Purchasing Agents	188	\$66,881

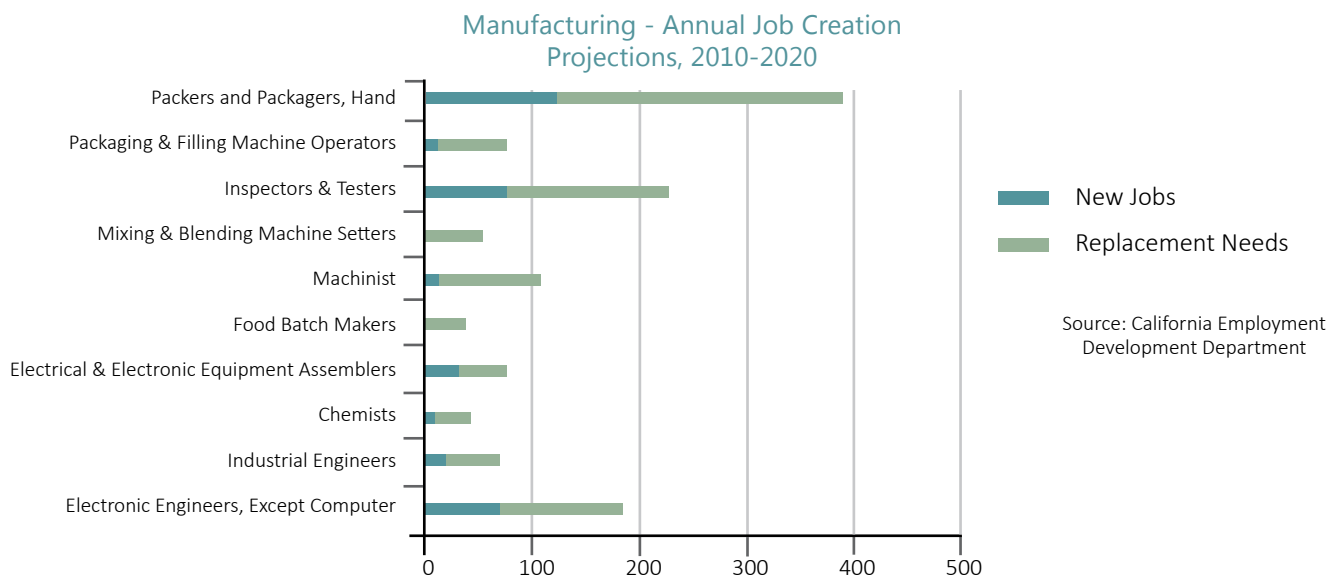
KEY ADVANCED MANUFACTURING OCCUPATION TRENDS

Orange County's diverse manufacturing sector is skewed toward advanced high-tech sectors such as Computer and Electronic Products and Transportation Equipment, which also feature the highest average manufacturing salaries. Although employment growth since 2012 has been relatively modest, average salaries for manufacturing workers rose, demonstrating that most current and projected job opportunities will consist mainly of replacing Orange County's technically skilled, but aging, incumbent manufacturing workforce. Wages are closely linked to educational attainment, with the top three occupations requiring a Bachelor's degree at minimum.

Many good paying, higher level jobs appear to be in high demand in Orange County. However, unlike Health Care and Information Technology (IT), most manufacturing job opportunities are replacements stemming from turnover rather than new creations — the majority of new employment will stem from movement within the talent pool rather than new openings.



Source: California Employment Development Department



Source: California Employment Development Department

HEALTH CARE

KEY INDUSTRY TRENDS

There are 12 occupations with over 100 current openings, totaling 4,195 current positions. Of those 12 occupations, the following nine exhibit high labor market demand metrics.

Average Salary of Open Positions: \$54,160

Top OC Cities - Health Care Percentage Employment

Orange	14.1%	Huntington Beach	4.4%
Newport Beach	8.9%	Mission Viejo	4.0%
Santa Ana	8.4%	Fountain Valley	3.9%
Irvine	7.4%	Garden Grove	3.8%
Anaheim	7.1%	Laguna Hills	2.5%
Fullerton	6.1%	Tustin	2.5%
Costa Mesa	5.2%		

Current "In Demand" Occupations- Entry Level	Openings	Average Salary
Medical Secretaries	390	\$41,718
Medical Assistants	267	\$35,036
Medical Caseworkers	234	\$34,449

Current "In Demand" Occupations Move up/Higher Level	Openings	Average Salary
Registered Nurses	1,698	\$87,632
Medical & Health Services Managers	358	\$106,185
Medical Scientists	222	\$90,579
Licensed Vocational Nurses	207	\$48,866
Medical Records/Healthcare IT	156	\$47,035
Speech-Language Pathologists	104	\$89,071

KEY HEALTH CARE OCCUPATION TRENDS

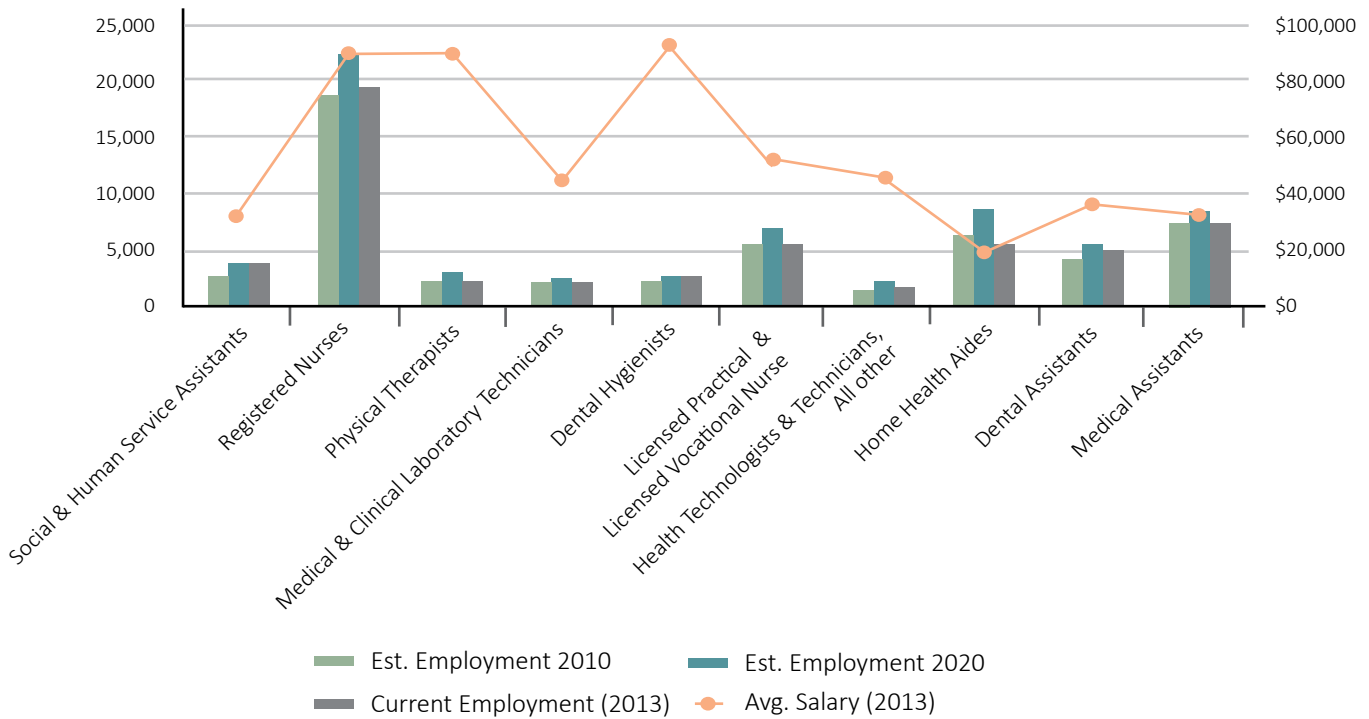
Health Care occupations projected to grow fastest include Dental Assistants, Registered Nurses, Home Health Aides, and Social and Human Service Assistants. Employment growth is spread across both high-wage and low-wage occupations, and education requirements vary in the sector. Most require at least an associate degree for entry-level employment, but home health occupations have comparatively lower entry barriers.

Nurses and Home Health Aides have the highest projected employment demand, each growing by at least 400 jobs annually. Over 82 percent of home health aide employment growth will result from new positions instead of filled vacancies, while RN, LVNs, Medical Assistant, and Dental Assistant job growth is more evenly split between new positions and job replacements of existing positions.

“Health Care occupations projected to grow fastest include Dental Assistants, Registered Nurses, Home Health Aides, and Social and Human Service Assistants.”

”

Health Care - Top Occupation Employment and Wages

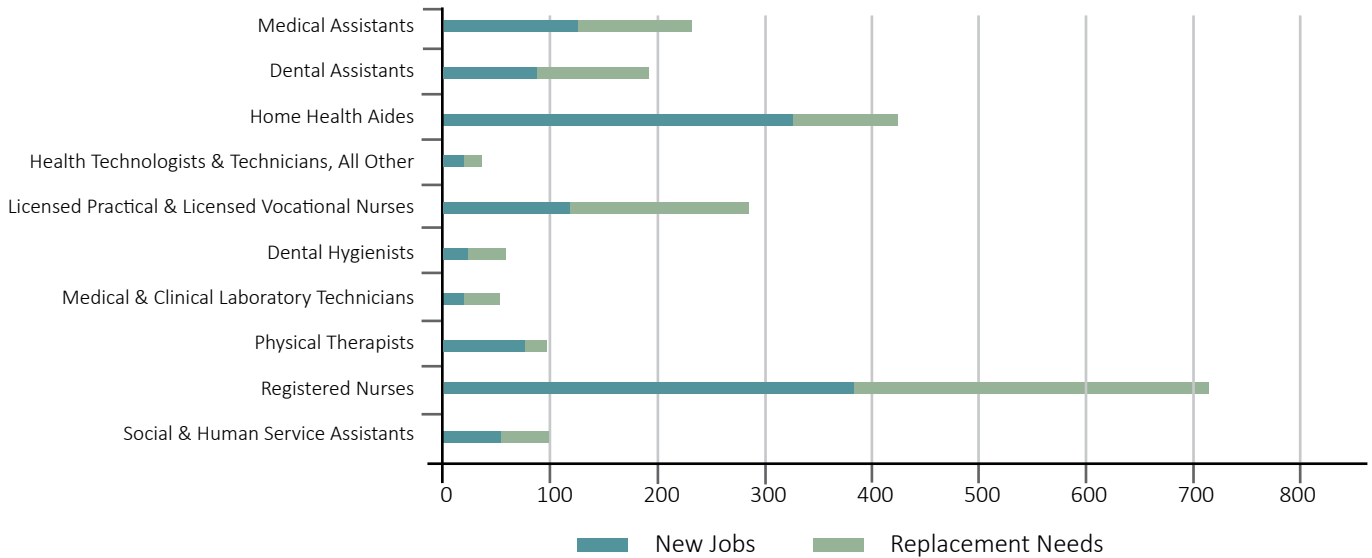


Source: California Employment Development Department

THERE IS A DEMAND FOR HEALTH CARE WORKERS

Nurses and home health aides each have the highest projected employment demand.

Health Care- Job Creation Projections, 2010-2020



Source: California Employment Development Department

INFORMATION TECHNOLOGY

KEY INDUSTRY TRENDS

There are 14 occupations with over 100 current openings, totaling 7,856 current positions. Of those 14, the following 10 exhibit high labor market demand metrics.

Average Salary of Open Positions: \$83,687

Top OC Cities - IT Percentage Employment

Irvine	25.8%	Orange	4.7%
Santa Ana	9.6%	Tustin	3.6%
Anaheim	8.0%	Huntington Beach	3.5%
Costa Mesa	6.0%	Lake Forest	3.2%
Brea	5.0%	Aliso Viejo	2.5%
Newport Beach	4.8%	Fountain Valley	2.2%

Current "In Demand" Occupations- Entry Level	Openings	Average Salary
Computer Support Specialists	664	\$58,123
Information Clerks	288	\$29,071

Current "In Demand" Occupations Move up/Higher Level	Openings	Average Salary
Computer Occupations, All Other **	1091	\$76,455
Software Developers, Applications	1079	\$102,962
Computer Systems Analysts	915	\$91,196
Web Developers	901	\$65,488
Network Administrators	654	\$85,814
Computer Programmers	342	\$83,203
Computer & IT System Managers	220	\$146,164
Information Security Analysts	118	\$92,946

** Includes Video Game Designers, Software QA, GIS Specialists, and Business Intelligence Analysts

KEY INFORMATION TECHNOLOGY (IT) OCCUPATION TRENDS

IT is a fundamental driver of modern economic success and competitiveness. IT allows the automation of business processes, development of information tools for decision making, connects businesses with their customers in an increasing number of ways, and provides productivity tools to increase efficiency. The flexibility of IT enables its many applications to solve complex business problems and supports and amplifies a dynamic IT savvy workforce.

IT occupations are widely dispersed in one way or another in nearly every industry sector — many modern businesses rely on computer technology as a business efficiency and communication tool. IT increasingly connects a region, from high school students completing school assignments, to employers interacting with clients, to increase the company's productivity.

The IT sector currently ranks at the top in terms of overall Orange County labor market demand, with job openings spread across many occupations both at the low and high ends of the spectrum. Primary IT growth occupational categories are Market Research Analysts, Computer Programmers, and Network Administrators. Programmers by trade are sought by a wide variety of companies for proprietary software design, network support, or process development and have surpassed the state's 10-year employment projections in just five years.

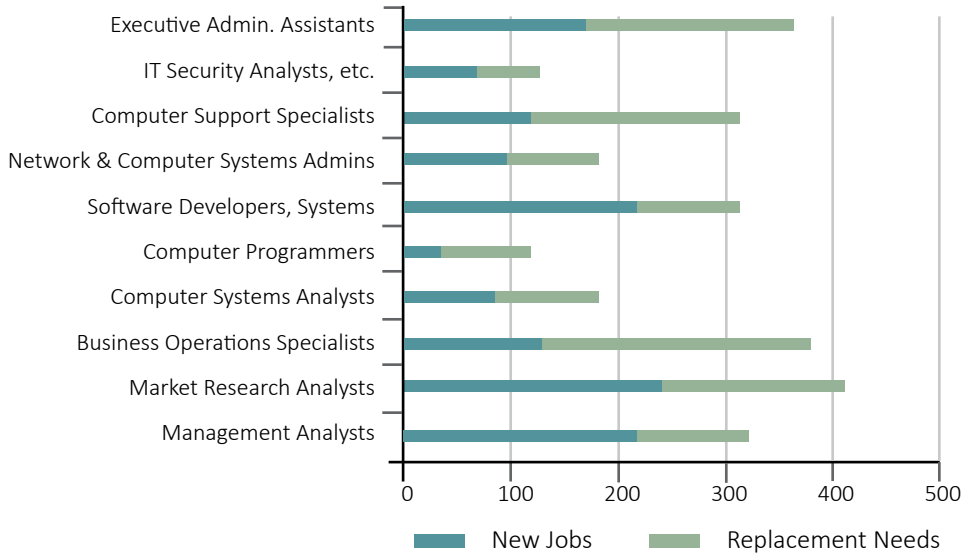
INFORMATION TECHNOLOGY CROSSES INTO MANY OCCUPATIONS



The IT sector **currently ranks at the top** in terms of overall Orange County labor market demand.

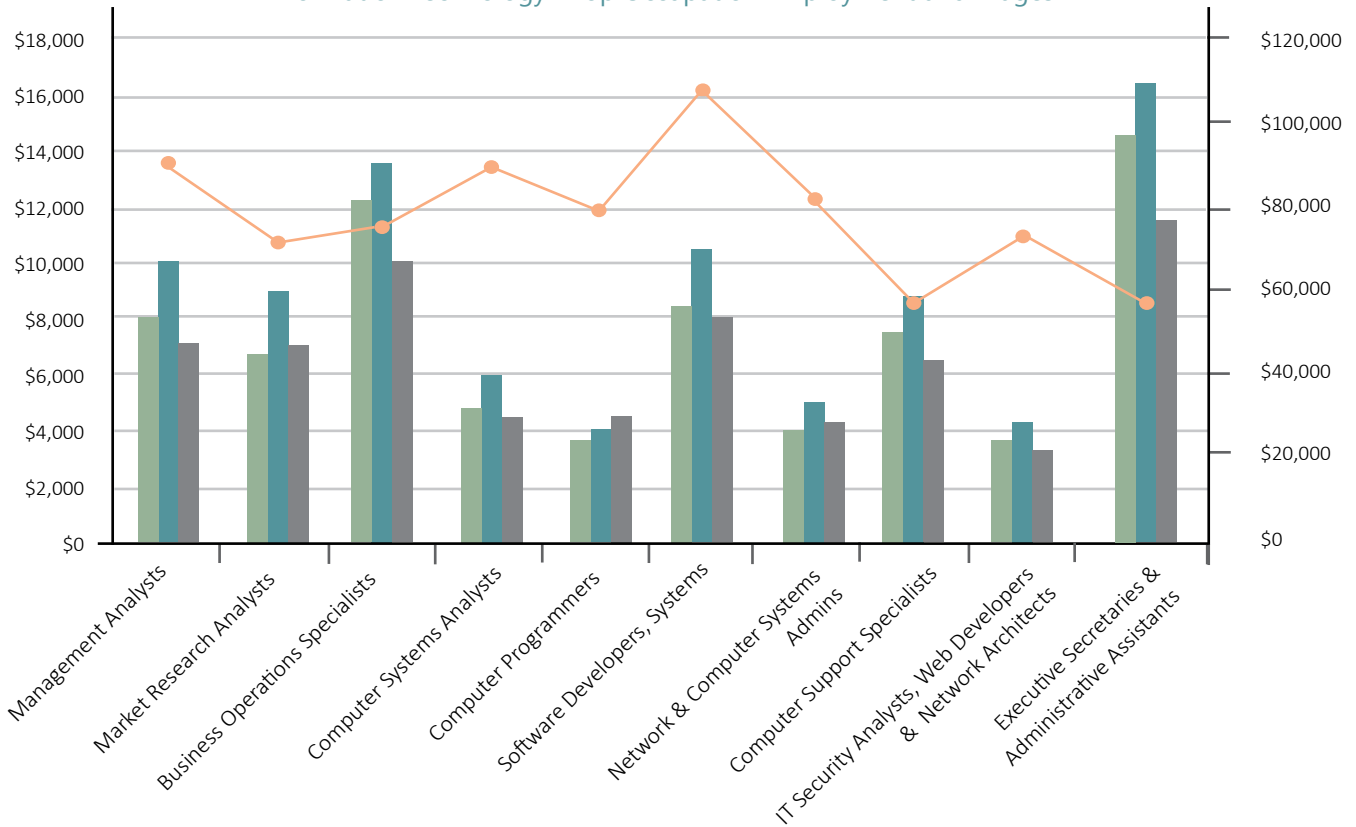
While the majority of IT jobs require certifications or degrees equivalent to a Bachelor's, entry-level opportunities such as Computer Support Specialists have lower education requirements. New job growth stems primarily from Software Developers, IT Security Analysts, and Market Research Analysts, while the majority of Computer Programmer positions are classified as replacement jobs. Business-related IT occupations lead projections due to their flexibility to fulfill employer needs in many different types of company settings.

Information Technology- Job Creation Projections, 2010-2020



Source: California Employment Development Department

Information Technology - Top Occupation Employment and Wages



Source: California Employment Development Department

■ Est. Employment 2010 ■ Est. Employment 2020
■ Current Employment (2013) ● Avg. Salary (2013)



VETERAN EMPLOYMENT IN ORANGE COUNTY

Military veterans are an ideal fit for a wide range of occupations with their discipline, dedication, and aptitude for technical subject matter. Establishing and maintaining programs designed to facilitate returning veteran labor market participation can set Orange County apart as a leader in providing a receptive home for veterans while simultaneously creating a compelling pool of high-grade talent for local employers.

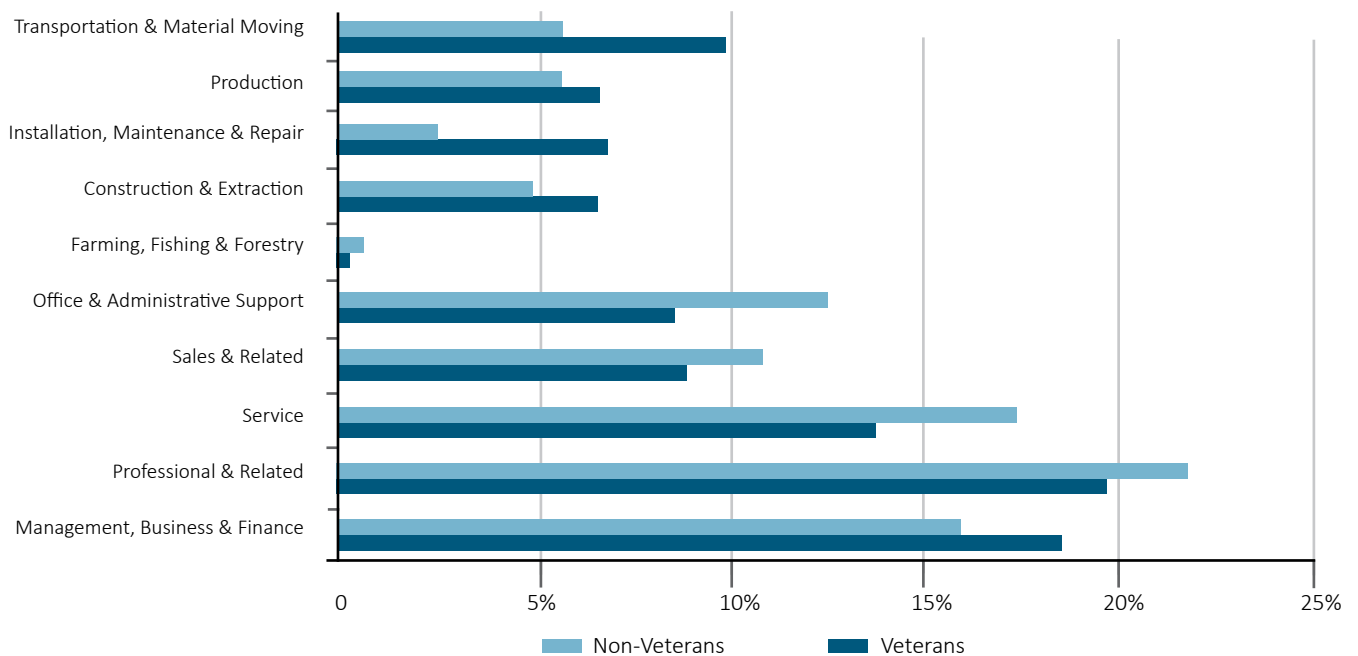
VETERANS EMPLOYMENT IN ORANGE COUNTY



WHY IS THIS AN ISSUE?

Veterans make an ideal fit for a variety of positions, and also come with intrinsic capabilities and advantages for companies hiring them. Military professionals have proven leadership capabilities, understand the value of teamwork in achieving long-term objectives, and maintain a consistent work ethic. Many come equipped with security clearances, government paid relocation assistance, and tax benefits for the hiring company. But most importantly, military veterans are technologically inclined to learning the skills required of business and technical occupations. At the national level, 38.2 percent of employed veterans work in management, professional, and related occupations in the United States. While many resources such as career One-Stop Centers exist for veteran-specific job postings, further initiatives to support former military personnel in transferring skills and gaining proper training will lead them to career success.

Veteran vs. Non-Veteran National Employment by Occupation, 2013



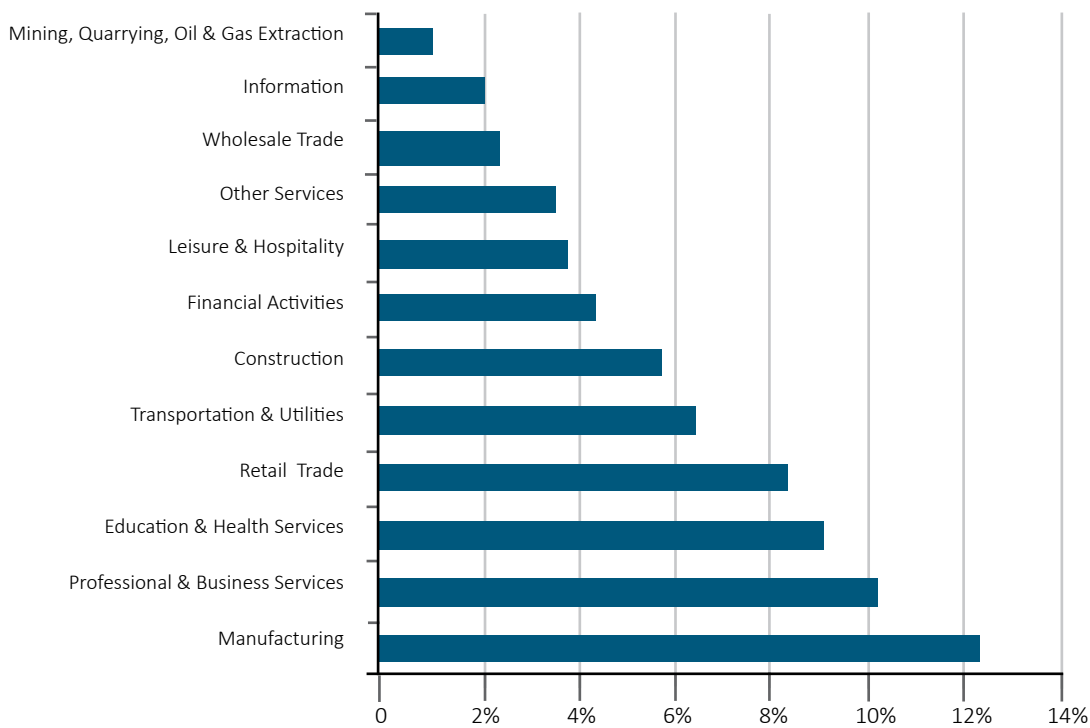
Source: California Employment Development Department

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Unemployment among military veterans, particularly those under the age of 30, is prevalent throughout the state and nation. California is a challenging region for veterans to find employment relative to the rest of the nation. In 2013, the labor force participation rate of military veterans was 48.7 percent, which is 2.6 percent below the United States participation rate. This signifies a higher concentration of “discouraged workers” among the veteran population of California. Over half of all veterans are not working and not actively looking for work. While veteran unemployment rates improved over the past year, the statewide unemployment rate for all veterans is currently 7.9 percent.

At 136,000 Orange County currently has the third highest number of military veterans in the state. Although Orange County’s veteran population is significantly more active with an 80 percent participation rate, local veterans aged 20 to 24 are about three times as likely to be unemployed as their civilian counterparts. While facing hindrances to attaining education opportunities that enable career growth, veterans have a great foundation in technical skills and teamwork dynamics.

U.S. Veteran Employment by Industry, 2013



Source: Bureau of Labor Statistics, Employment Situation of Veterans 2013

The prevalent industries employing veterans at the national level show a valuable opportunity for Orange County, as many of the top industries hiring veterans are aligned with the most prominent industries in the county. Manufacturing, Professional Services, and Education/Health are all not only hallmarks of the Orange County economy, but also key employers of veterans. With supportive programs and partnerships, company leaders can help expand the opportunities veterans have for finding work aligned with their transferable skills gained in the military.

“While veteran unemployment rates improved over the past year, the statewide unemployment rate for all veterans is currently 7.9%”

TRANSFERABLE SKILLS OF VETERANS

How well are veterans prepared for reentry into the civilian job hunt? What skills are “in demand,” and what occupations are a strong fit for returning? While many veterans’ employment assistance services offer web resources that translate military skills into equivalent civilian occupations, these tools are limited in analyzing local labor markets to determine regionally-demanded occupations most likely to be good fits for veterans.

Logistics – Army Supply Men and Logistics Specialists perform administrative duties, compute combat service support requirements, compile and maintain logistics data, and coordinate all basic CSS functions in support of the logistics portion of operations. Technically proficient and well-versed in applying modeling techniques to improve operational efficiency, military logisticians are knowledgeable in computing technologies and how they apply to directing others and clearly communicating complex problems. Production oversight jobs in manufacturing are an ideal fit for their talents, but their inherent business-centric organization skills also enable success as secretaries and administrative assistants for executive clients.

Rifleman/Gunner – Aerial gunners and infantrymen operate weapons and equipment in ground and air combat operations, with other duties including evaluating terrain and recording topographical information, and assessing the need for supporting fire and mine-sweeping services. Quick critical thinking, physical strength, navigational understanding, and clear communication are all essential skills inherent to combat specialists. Recommended occupations by the California Employment Development Department (EDD) are primarily defense-oriented services such as police patrolmen and security professionals, as well as bus drivers as most are equipped with an aptitude for navigation.

Information Technology (IT) – Military information systems technicians direct and coordinate data processing and production activities, such as machine design applications, programming, and automatic data processing (ADP) equipment operation. In addition to network security, these specialists also maintain Automation Battlefield Computer Systems (ABCS) and implement ad hoc network systems in tactical environments. Like military logisticians, IT specialists in the military command authority over computer technology, programming, complex problem solving, and consulting with others to address technological issues. With inherent aptitude for systems, software, and service, veterans will find abundant opportunities for a good employment fit in database administration, software programming, and the emerging field of health care information technicians.

Military Police – Security forces provide tertiary services to combat areas through battlefield circulation control, area security, managing prisoners of war, law and order operations on the battlefield and support during peacetime. As natural law enforcement officers, they also conduct crime scene investigations and enforce traffic regulations, and are great fits for occupations requiring depth of knowledge in compliance standards, such as in construction.

VETERANS ARE SUITED FOR A WIDE RANGE OF OCCUPATIONS



Many Orange County employers are seeking the skills that veterans exhibit.

Veterans have a high degree of problem solving aptitude, comfort with technology, strong communication and verbal comprehension, and conceptual organization abilities.

These four military occupation groups demonstrate clear transferable skills that are “in demand” in Orange County workplaces. They have a high degree of problem solving aptitude, comfort with technology, strong communication and verbal comprehension, and conceptual organization abilities. From these four groups, 17 occupations are best aligned to support new military hiring. Each of the 17 occupations designated as prominent veteran employment opportunities are outlined to the right in terms of current and projected employment trends.

More than **35%** of veteran-friendly jobs in demand are IT related.

Another **35%** are logistics related

The greatest levels of employment growth for Orange County within these occupations are in services such as secretarial work, security, and software development. However, there is significant growth of technology-oriented professions, such as network administrators, health information technicians, and computer systems analysts. Orange County’s demand for veteran-friendly occupations is a blend of professional and technical and is more heavily concentrated in these areas than at the state level. Over 35 percent is concentrated in IT-related occupations, with another 35 percent attributed to logistics-oriented positions. Orange County can encourage specializing in IT and logistics to find work locally, providing services tailored to help these specialists find secure, stimulating employment.

Veteran Employment - Key Employment Opportunities

Related Military Background	Civilian Occupations	Percent Growth 2010-2020	Current Employment, 2013
Logistics	Executive Secretaries & Administrative Assistants	11.6%	11,420
Logistics	Production, Planning, & Expediting Clerks	4.8%	5,170
Logistics	Industrial Production Managers	3.5%	2,270
Logistics	First-Line Supervisors & Managers of Production and Operating Workers	-1.0%	6,390
Logistics	First-Line Supervisors & Managers of Transportation & Material-moving Machine and Vehicle Occupations	9.0%	1,210
Rifleman or Gunner	Bus Drivers, School & Special Client	4.4%	1,690
Rifleman or Gunner	Security Guards	16.1%	9,890
Rifleman or Gunner	Correctional Officers & Jailers	-2.2%	910
Rifleman or Gunner	Police and Sheriff’s Patrol Officers	2.8%	4,180
Information Technology	Computer Support Specialists	13.8%	6,480
Information Technology	Computer Systems Analysts	18.5%	4,960
Information Technology	Software Developers, Applications	19.6%	9,230
Information Technology	Medical Records & Health Information Technicians	20.7%	1,460
Information Technology	Network & Computer Systems Administrators	23.3%	4,540
Military Police	Bus Drivers, Transit & Intercity	3.6%	1,600
Military Police	Construction Managers	-1.4%	2,480
Military Police	Detectives & Criminal Investigators	-3.9%	740

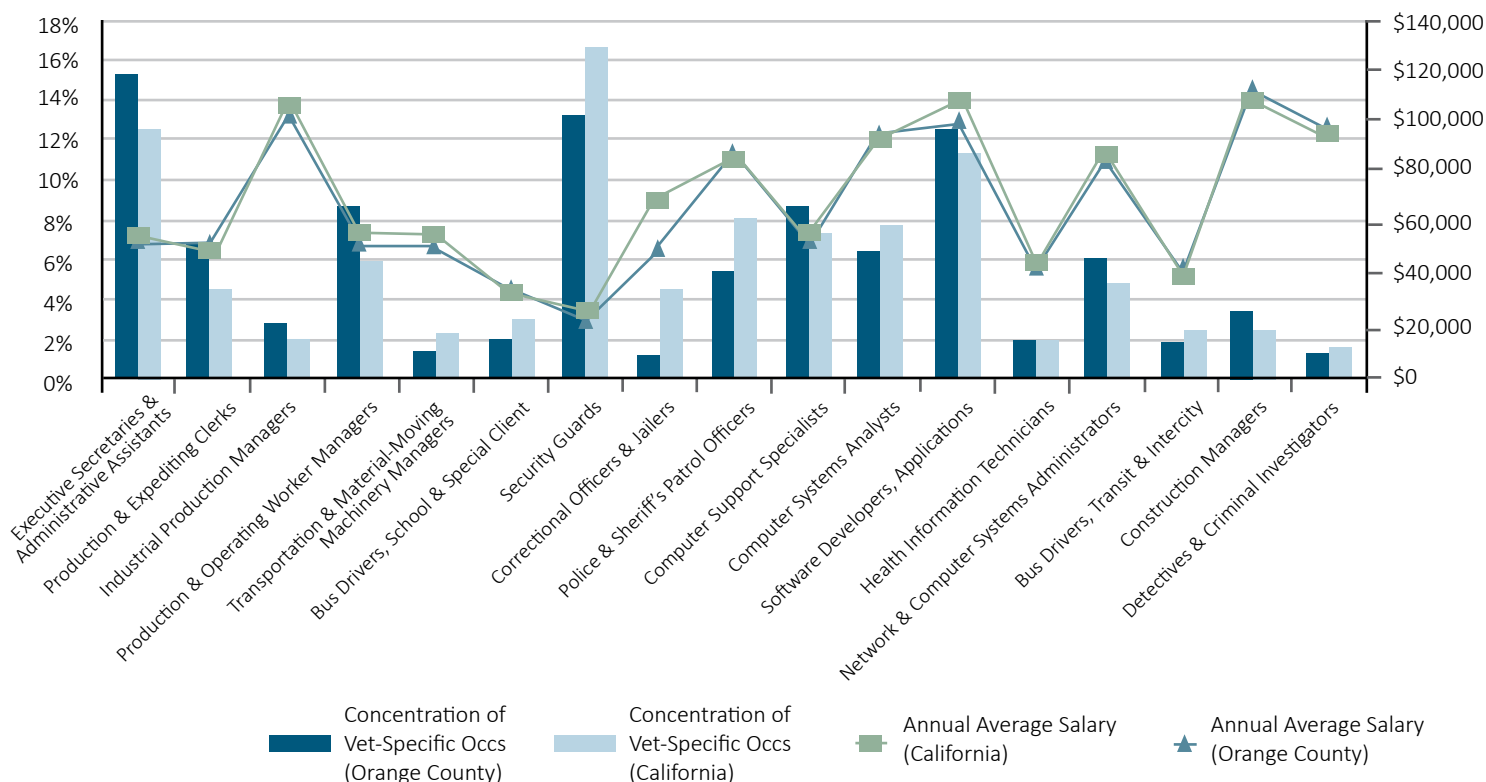
Source: California Employment Development Department

VETERAN UNEMPLOYMENT IS PREVALENT IN ORANGE COUNTY

Local veterans aged 20 to 24 are about **three times as likely to be unemployed compared to their civilian counterparts.**



Veteran-Friendly Occupation Comparisons Orange County vs. California, 2013



Source: California Department Of Education, Educational Demographics Unit

CAREER ONE-STOP CENTERS

Orange County Workforce Investment Board (OCWIB) actively serves veterans' education, training, and employment needs — offering customizable employment services at One-Stop Centers throughout Orange County. The Westminster One-Stop Center regularly holds veteran-centric networking events twice a month, and supplements these opportunities with veteran-specific resume and career-searching workshops. OCWIB's veteran support is not limited to employment services. Under the OC4Vets program, OCWIB works in collaboration with the County of Orange Health Care Agency, County Veterans Service Office, and other partners to provide health care and housing support services to Orange County veterans. The collaboration provides job development and job support, coaching and training, behavioral health services, and housing assistance to the veteran population — regardless of a veteran's status as active, discharged, or reserve guard — and their families.

THERE ARE NUMEROUS
PROGRAMS DESIGNED
FOR VETERANS



Orange County offers a variety of programs and services designed to assist with housing, medical, educational, and elder care.

VETERANS' EMPLOYMENT-RELATED ASSISTANCE PROGRAMS (VEAP)

OCWIB is very successful in receiving Veterans' Employment-Related Assistance Program (VEAP) awards from the California EDD. Collaborating with the Pacific Gateway Workforce Investment Network (PGWIN), OCWIB uses VEAP awards to expand locations and services offered by One-Stop Centers in the region and build out veteran wrap-around support services, such as housing assistance and medical care. The project primarily serves those recently separated from active military duty within the last 48 months and other eligible veterans. Services are offered at the Orange County One-Stop Centers located in Westminster, Irvine, Buena Park, and at the Joint Forces Training Base in Los Alamitos.

VEAP is designed to provide veterans with training that can lead to industry recognized certificates or degrees that are required to obtain employment within high growth industries. Several examples of career placements offered by VEAP include:

- Global Logistics;
- Medical Assistant;
- Nurse Assistant/Home Health Aid;
- Emergency Medical Technician;
- Project Management;
- Cisco Network Admin;
- OSHA Training;
- Commercial Driver; and
- Security Technology and Administration.

Many of the above are aligned with Orange County workforce skill demand for veterans as previously discussed. Additionally, the VEAP offers no-cost training for several IT certifications necessary for advanced work as a network or database administrator, including Microsoft/Cisco Certified Network Admin, Six Sigma Project Management, Microsoft Office Specialist, and CompTIA A+/Network+/Security+ credentials.

ORANGE COUNTY VETERANS SERVICE OFFICE

Located centrally in Santa Ana, the Orange County Veterans Service Office helps eligible veterans and their dependents file for financial benefits and other services. The Veterans Service Office acts as a guide for claimants in the application process to help lead veterans through paperwork and documentation required to receive benefits. The County's OC Community Services is the organization behind events specific to veterans, ranging from networking mixers to summer academic boot camps. Other working groups, such as the OC Veterans Advisory Council, the Orange County Service Academy Resource Network (OSCARN), and the Orange County Veteran and Military Families Collaborative (OCVMFC), promote their regular meetings through the Veterans Service Office, and coordinate meeting outcomes with all invested parties. As part of the County's OC Community Services Department, the Veterans Service Office connects veterans to other resources, including: :

- Housing Assistance — The OC Housing Authority gives veterans top priority preference for Section 8 Housing Choice Vouchers. Veterans Affairs Supportive Housing Vouchers are also available to homeless veterans.
- Veterans Benefits — The Veterans Service Office actively pursues the rights of veterans to receive Department of Veterans Affairs benefits for housing, disability, medical, and educational entitlements.
- Service for Older Veterans — The Office on Aging provides services such as caregiver support, home delivered and congregate meals, transportation, health education and information and assistance to older veterans and their families.

At the heart of the Veterans Service Office's work is the OC Veteran Advisory Council, created in 1978 and comprised of members appointed by the Orange County Board of Supervisors. The Council is made up of nine Orange County military veterans with honorable discharges who volunteer their time and services to advise the Board of Supervisors on veteran issues, communicate among other local veterans groups, and to promote veteran involvement with locally available services.



CROSS-CUTTING INDUSTRY HIGHLIGHTS

Programs and policies should support emerging industries in order to accelerate growth and proliferation throughout Orange County's traditional industry clusters. International Trade, Information Technology, Creativity and Green Technology are multi-industry intersection points that drive employment growth and elevate the diversity of Orange County's occupations. Industries within these cross-cutting cluster groups are expected to both support traditional sectors and become major sources of employment and income generation.

CROSS-CUTTING INDUSTRY HIGHLIGHTS



WHY IS THIS AN ISSUE?

Orange County has transitioned into a knowledge-based economy fueled by the need to inspire high-skilled talent to grow at home. Emerging industries are increasing hiring rates as opposed to the trends of a leaner workforce in previous years. The county's entrepreneurial and innovative community offers an ideal platform for employers and workforce professionals to unite and develop new opportunities in four emerging groups of industries that blur traditional cluster boundaries – International Trade, Information Technology (IT), Creativity and Green Technology. These four drivers are important job-creation drivers in Orange County's major industry clusters. This report monitored changes in these cross-cutting cluster groups over the past several years, which will help education and workforce development institutions design policies and education programs to effectively meet employer demand in the county's most critical areas for growth potential.



OC'S FOUR KEY CROSS-CUTTING INDUSTRY CLUSTERS

Many of the most vibrant, cutting-edge economic and workforce drivers cross or overlap traditional industry cluster boundaries. Because the economy is changing more rapidly than classification systems can keep up with, "Cross-Cutting Industry Clusters" are emerging areas of the regional economy that are not yet tracked by traditional industry classification systems, but prove to increasingly drive economic growth and job creation.

For Orange County, research has identified four key cross-cutting industry clusters:

- **International Trade**
- **Information Technology**
- **Creativity**
- **Green Technology**



This section explores these interrelated components of cross-cutting industry formation and how each driver overlaps and enhances its constituent cluster industries. The four cross-cutting clusters are recognized for their horizontal impact as core components of many industries. Information Technology, for instance, is present in any corporation that relies on computer networks and software for daily operation, which is applicable to nearly any type of company. Similarly, Creativity-oriented occupations are essential to any firm requiring design or communications specialists, regardless of the firm's industry. Green Technology continues to benefit from increasing demand for environmental upkeep and responsibility in new business practices, and International Trade is a critical gauge for Orange County's global competitiveness in the services it offers and products it produces.

In summary, these four drivers are increasingly important to developing and maintaining competitive advantage of Orange County's clusters. They generate value by creating jobs for a broad range of firms and supplement continued economic growth.

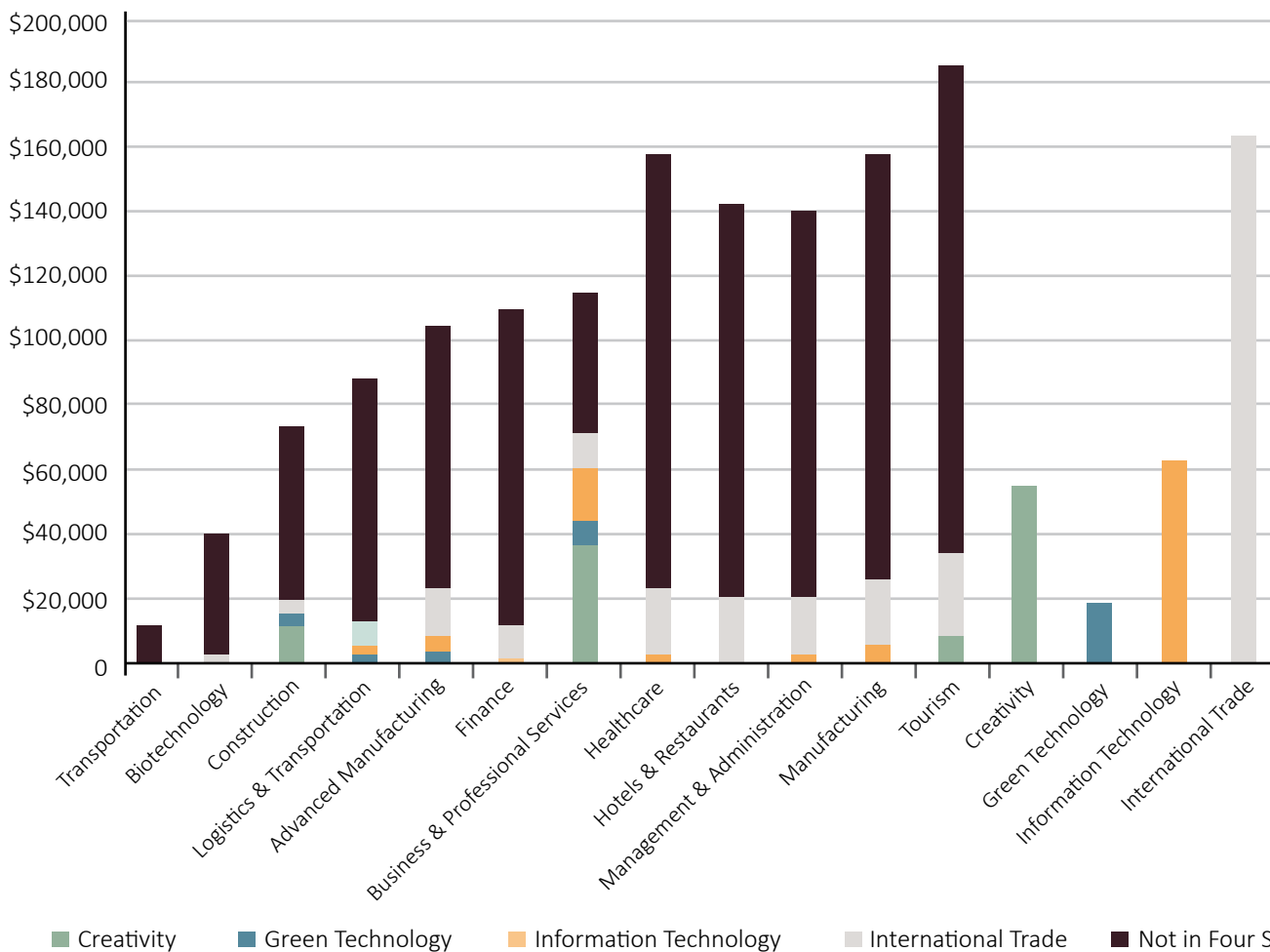
HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Although the recession hampered growth in some sectors in previous years, industries within these cross-cutting cluster groups are expected to both support traditional sectors and become major individual sources of employment and income generation. In total, the four cross-cutting clusters accounted for approximately 271,000 jobs across 12 different industry clusters in 2013. While International Trade and Creativity both made ample year-over-year gains in employment, Information Technology and Green Technology saw modest gains compared to 2012:

- International Trade: 165,218
- IT: 61,438
- Creativity: 51,050
- Green Technology: 18,350

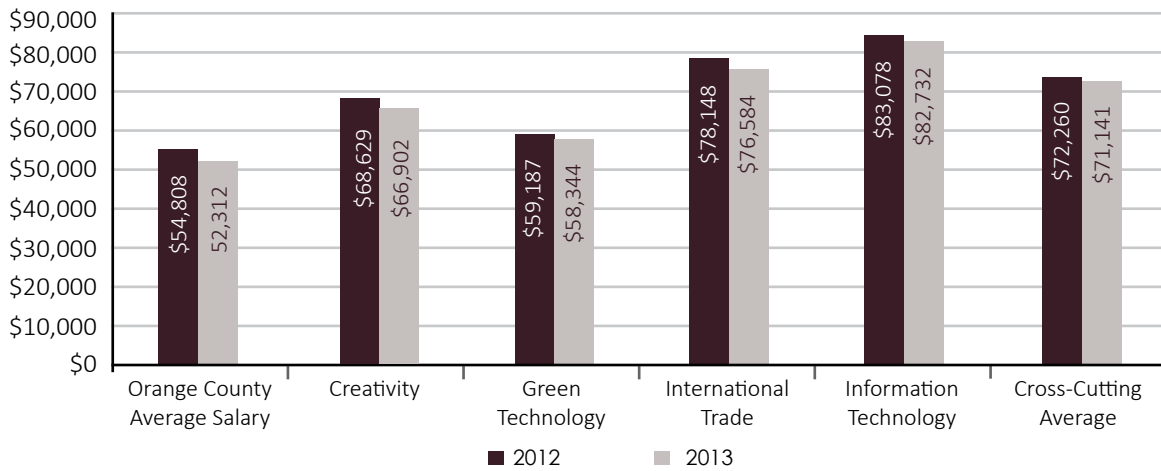
Workplace compensation levels offer more evidence that workers in cross-cutting clusters find their skills consistently “in demand.” Salaries in cross-cutting clusters average roughly \$19,000 above the overall average Orange County wage, led by Information Technology and International Trade.

Orange County Cluster Drivers, 2013



Source: OCBC Analysis of California Employment Development Department Data, OTIS Report, Next10, and Los Angeles Economic Development Corporation

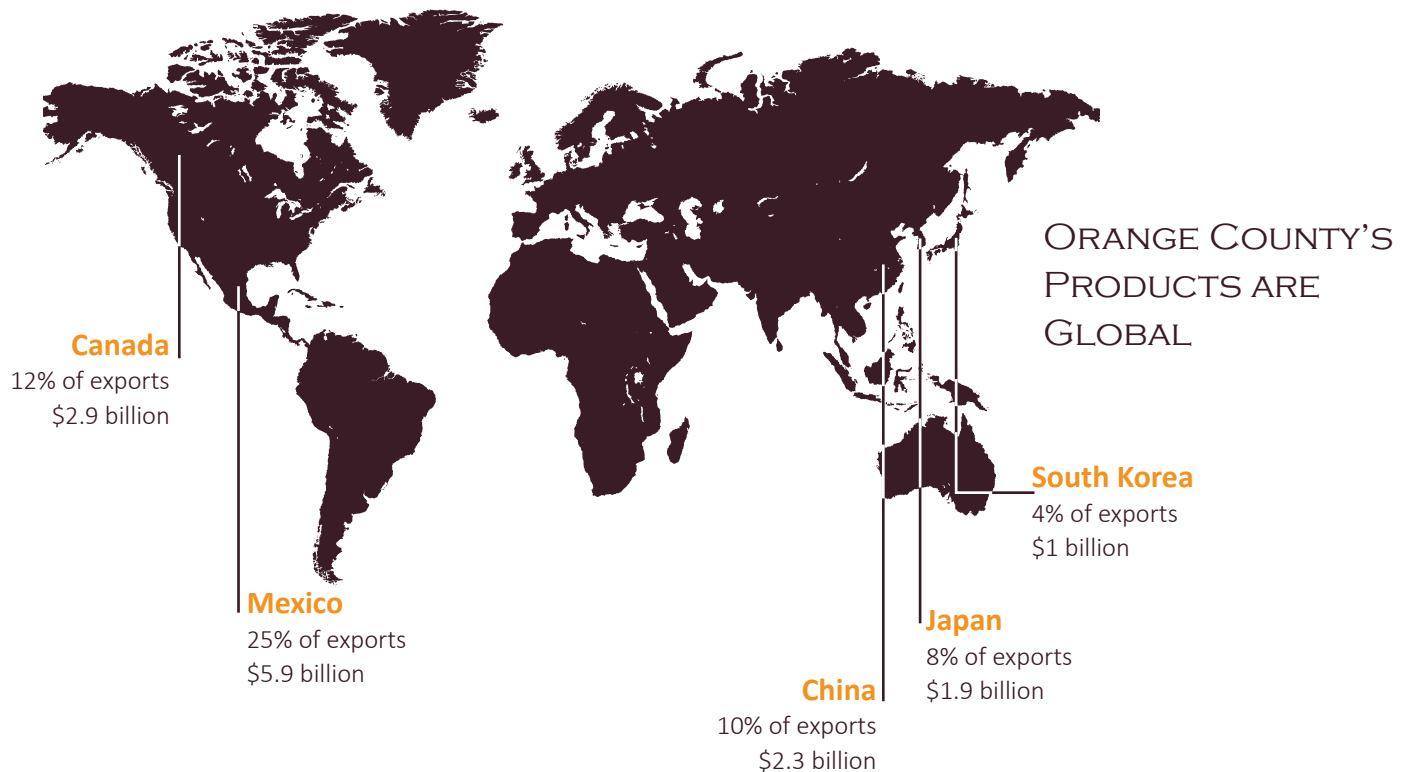
Average Salaries in Orange County's Selected Industry Drivers, 2013



Source: OCBC Analysis of California Employment Development Department data, Otis Report, Next10 and Los Angeles Economic Development Corporation

INTERNATIONAL TRADE

Orange County's geography provides it with distinct advantages in International Trade — proximity to the ports of Long Beach and Los Angeles, a well-connected freeway and road system for fleet transportation, rail lines providing national trade linkages, proximity to international and domestic airports such as John Wayne Airport and LAX, and a growing multicultural presence. Along with Orange County's existing manufacturing base (computer software, electronics and transportation equipment) these factors create compelling opportunities for International Trade, which directly and indirectly accounts for over 165,000 jobs. Additionally, sectors tied to International Trade experience much faster economic growth than other economic drivers. Understanding characteristics of International Trade, such as the type and destination of trade, is very important to understanding Orange County's economy, which continues to rapidly cultivate trade relationships with growing economies like China, Japan, South Korea, Mexico, and Canada.



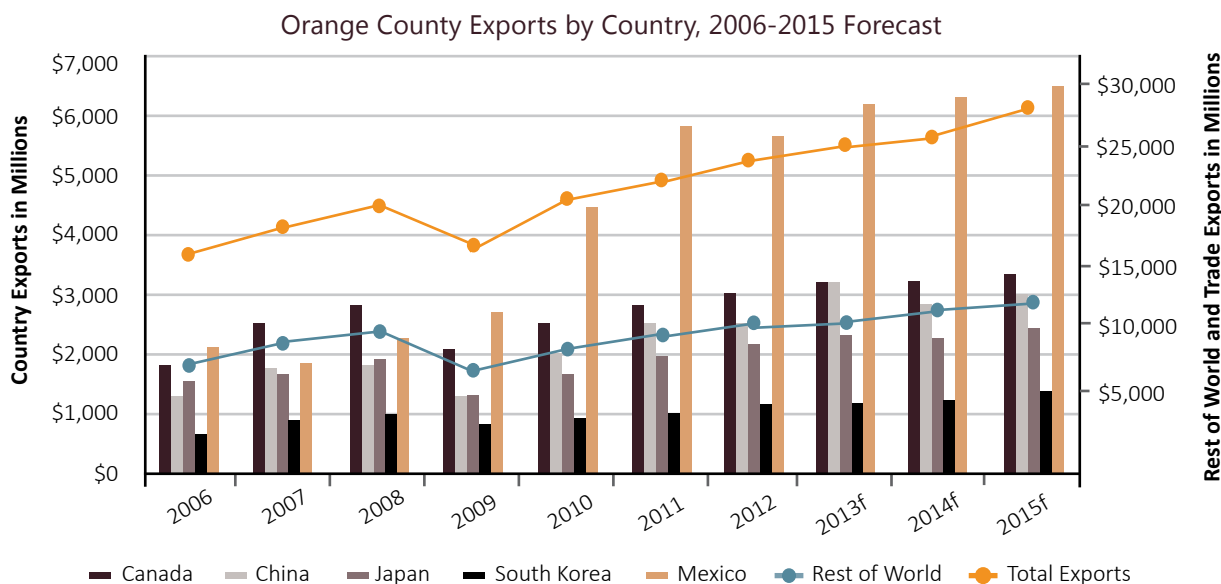
California State University, Fullerton's Institute for Economic and Environmental Studies' (IEES) most recent edition of "International Trade Forecast: An Overview of Orange County and Southern California Exports" states that the Los Angeles-Long Beach-Santa Ana metro area ranks third in the nation for merchandise export volume, and that roughly 13 percent of Orange County's gross metropolitan product is generated from exports. From 2003 to 2007, the total volume of exports grew an average of 13 percent with export values reaching \$18 billion in 2008 — doubling levels seen almost a decade ago. Although the Great Recession caused exports to experience dramatic declines, falling by 14.9 percent from \$17.9 billion to \$15.3 billion in 2009, the county experienced a noteworthy recovery, with rapid export growth of 22.2 percent in 2010 and 21.7 percent in 2011. The IEES estimates that exports will continue to grow modestly through the coming years, reaching about \$28 billion in value by the end of 2015.

“ Roughly 13 percent of Orange County's gross metropolitan product is generated from exports. ”

Orange County's top countries for exports are Mexico and Canada, accounting for \$5.9 billion and \$2.9 billion in trade, respectively. China, Japan, and South Korea round out the top five trade partners for the county, accounting for 21.9 percent of merchandise exports combined. Export growth is based on these countries' economic expansion; China's economy expanded by 7.7 percent in 2011, while South Korea's increased by 3 percent and Canada's by 2 percent.

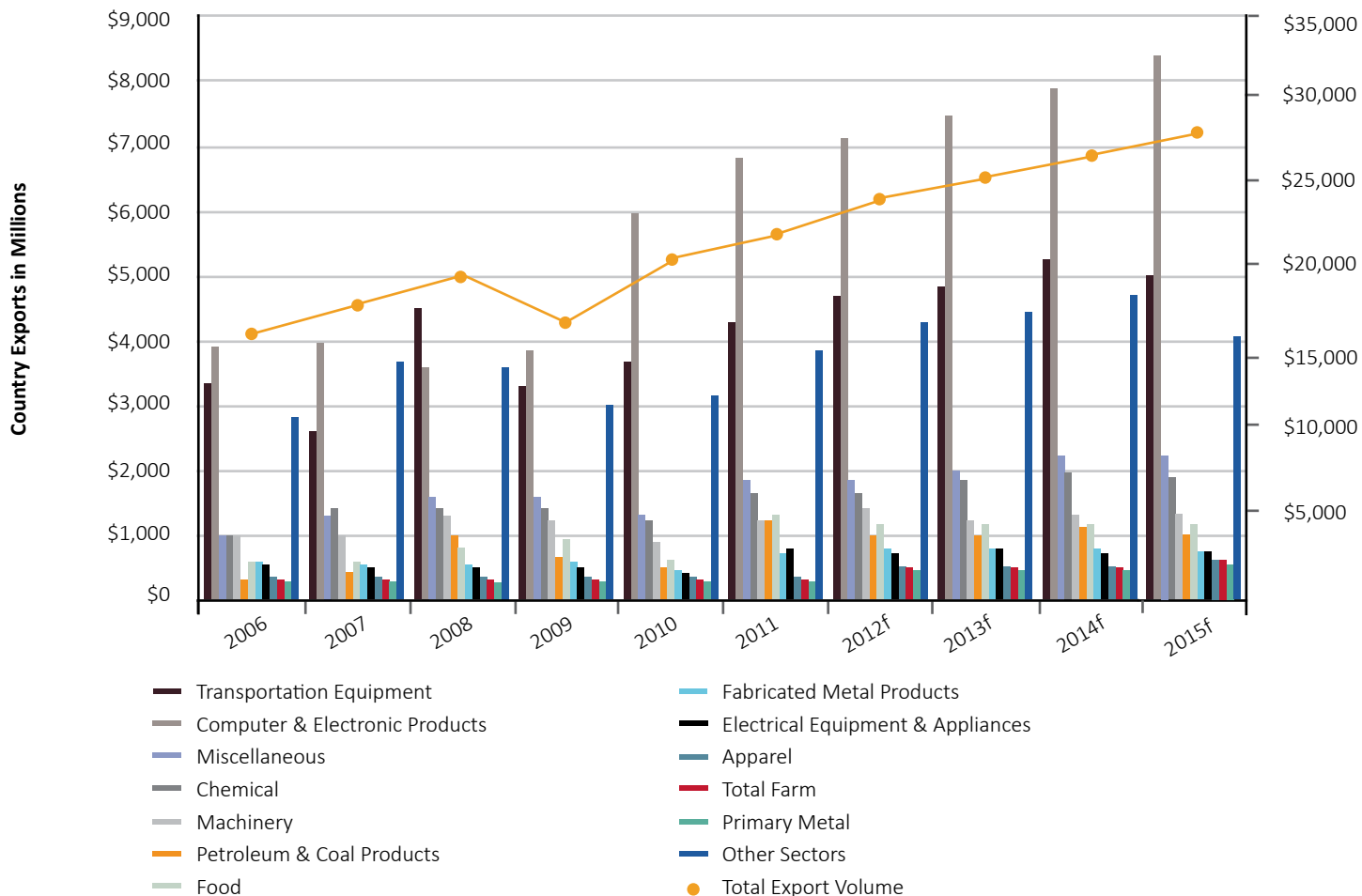
Consistent with previous years, the two most dominant export sectors continue to be Transportation Equipment and Computer/Electronic Products, which account for over 48 percent of total exports and exceeded \$11.7 billion. Other significant export trade sectors for Orange County include Chemicals, Machinery, and Miscellaneous Goods — together comprising \$4.5 billion.

Though Transportation Equipment took a slight hit in 2009, the sector is already estimated to have returned to pre-recession levels of export volume, and is on track to reach over \$5 billion by 2015. Computer and Electronic Products, conversely, maintained growth even through recessionary years, and total exports are anticipated to reach \$8.4 billion by the end of 2015. Total export volume was \$24 billion in 2012, with the highest year-over-year growth occurring in Petroleum and Coal, Miscellaneous Goods and Food Products.



Source: IEES, California State University, Fullerton

Orange County Exports by Sector, 2006-2015 Forecast



Source: IEES, California State University, Fullerton

ORANGE COUNTY'S EXPORT MARKET IS GROWING



Orange County's exports experienced a **rapid growth of 21.7% in 2011.**

Exports are expected to continue to grow, reaching about **\$28 billion in value by the end of 2015.**

The two most dominant export sectors are Transportation Equipment, and Computer and Electronic Products.

A highly skilled IT workforce is essential to driving economic growth in a rapidly growing knowledge-based economy. IT companies provide strong economic growth potential, offer higher than average wages, and support a broad range of skilled workers and professional services. Therefore, regions with a large and diverse high-tech economy have an edge in attracting and retaining high-tech firms because of their deep employment pool and other factors that encourage industry clustering. A diverse, skilled IT workforce that meets the needs of both vertical and horizontal IT employers is also more resilient during economic downturns than markets that are overly dependent on a particular industry. Specialized skills derived from the STEM (science, technology, engineering and mathematics) disciplines are widely applicable to a host of Orange County corporations, and will continue to be for the foreseeable future.

THE IT INDUSTRY IS KEY FOR OC'S GROWTH



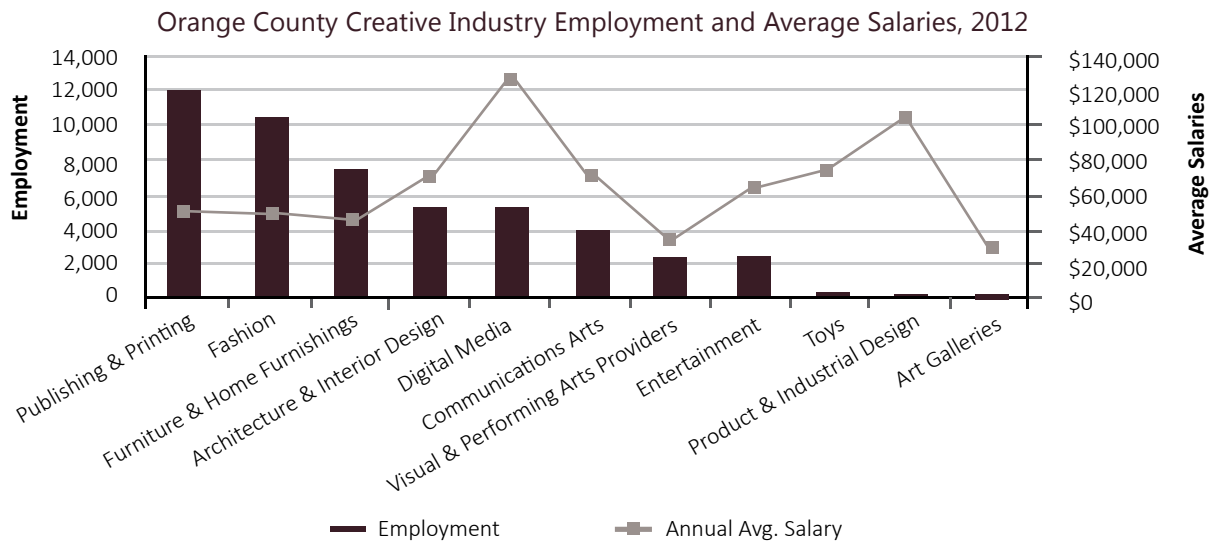
The average IT salary is \$82,732, which is about \$30,000 more than the county's annual average.

Business and technical skills are integrated in today's workforce, with many occupations bridging the business and IT worlds.

Orange County has long been a key player in electronic software, technical services, and hardware manufacturing. The majority of Orange County's international exports rely on the success of IT. Occupations that connect businesses and provide computer software products and services have continually aided the growth in employment of numerous companies within the county, especially for companies outside of the technology industry. The Professional and Business Services industry relies greatly on companies using information technology for day-to-day operations, from third-party software as a service (SaaS) tailored for each company's needs, to innovative data storage solutions utilizing cloud computing resources. These and many other new technologies allow businesses to become more attuned to their customers' needs and promote greater efficiency and effectiveness in business-to-business markets, allowing for superior resource allocation and more sophisticated analysis capabilities.

The average IT salary is \$82,732, about \$30,000 more than county's annual average. According to California's Employment Development Department, the state's top-earning occupations in IT include Information Systems Managers (\$140,555 annual salary), Information Research Scientists (\$121,248 annual salary), and Computer Hardware Engineers (\$110,926 annual salary). Business and technical skills are integrated in today's Orange County, with occupations that bridge the business and IT worlds becoming the main driver of employment and economic activity. California's Employment Development Department recently reported that three of the top six occupations with the most job openings in Orange County were related to information technology. A key issue to address in the coming years is in supplying employers with a steady pipeline of students and technicians capable of filling gaps in IT employment locally. This topic is further explored in the Workforce Skills Gap section of this report on page 40.

Orange County’s increasing focus on STEM as a critical competitive advantage evolved into an emphasis on STEAM – adding “Arts” alongside the technical disciplines associated with STEM. The Creativity sector consists of industries that emphasize culture, art and design as either a primary driver or significant contributor. More specifically, the sector consists of creative professionals and enterprises that use original ideas to create innovative products or unique experiences.



Source: Otis College of Art and Design, Los Angeles Economic Development Corporation

CREATIVE PROFESSIONS EMPLOYMENT IS EXPANDING



Orange County’s Creative professions expanded by over 15,000 jobs between 2012 to 2013.

Creative professions intersect with traditional industries on many levels as two-thirds of the Creativity cluster’s employment is derived from the Business and Professional Services cluster, signifying a multi-industry reach. Thanks to the new definition of Creative professions that includes Publishing and Printing, creative professions expanded employment by over 15,000 jobs from 2012 to 2013, an increase of over 40 percent since last year. Of particular note is the rise of Digital Arts as a critical component of many marketing and communications departments. Publishing, Fashion, and Home Furnishings lead employment figures for creative industries, accounting for 30,400 jobs combined.



Science



Technology



STEAM skills are applicable for many OC businesses.



Math



Engineering



Art

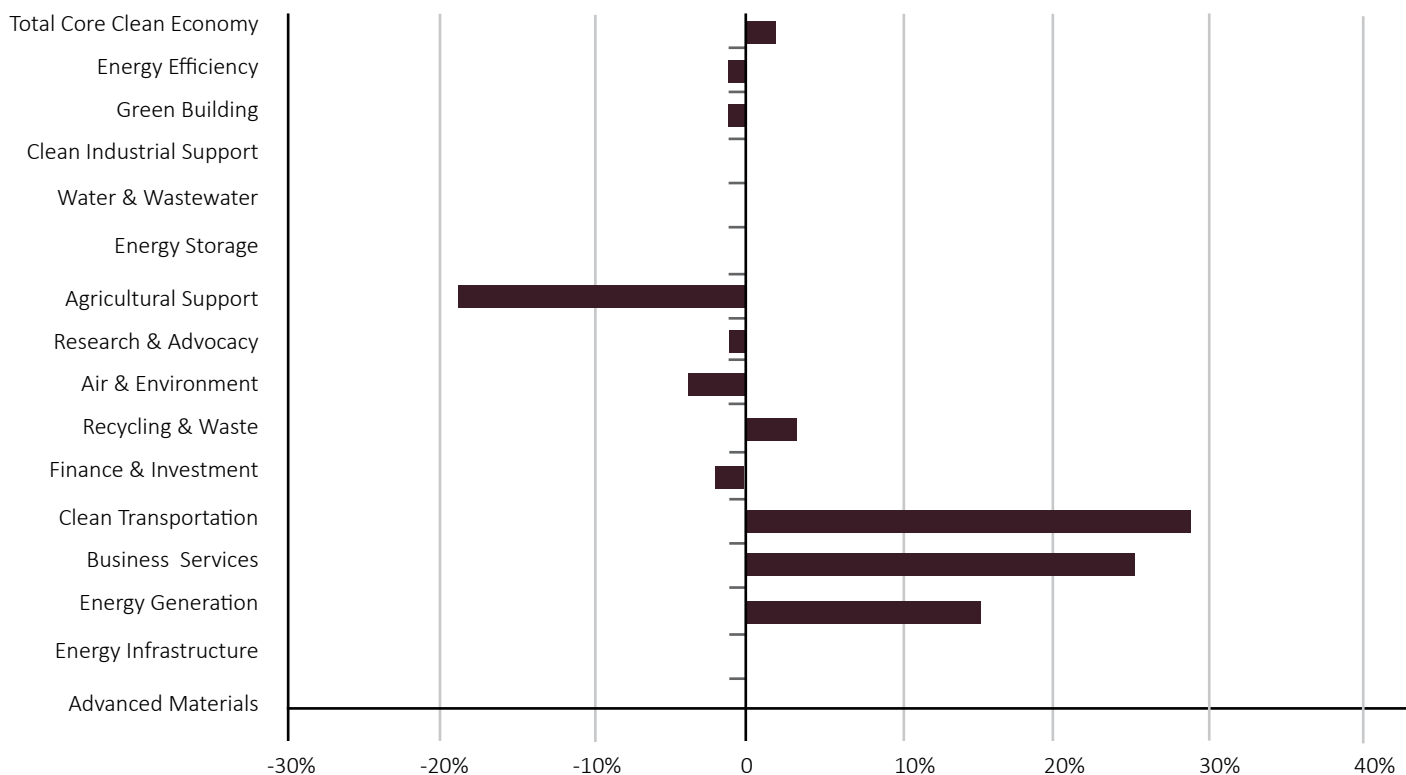
GREEN TECHNOLOGY

Although many Orange County companies adapted operations to comply with recent sustainability related state and federal legislation, they also discovered that Green Technology practices make good business sense. According to Next 10's latest edition of the "Many Shades of Green" report, Orange County made great strides in the clean transportation segment with a 28 percent employment increase from January 2011 to 2012. Next 10 stated that the region also experienced the third highest overall expansion in core clean sectors, translating to more than 18,000 new jobs for Orange County. The clusters with the greatest employment totals in Green Technology for 2012 included Business and Professional Services, Advanced Manufacturing, and Construction.

Next 10 categorizes Green Technology employment across 15 clean economy segments, ranging from infrastructure to agricultural support, and found significant differences in each segment's growth since the beginning of the decade. The greatest employment growth stemmed from Clean Transportation, thanks to Orange County's commitment to alternative fuel vehicle infrastructure. The backbone of growth for Green Technology also includes Business Services, Energy Generation, and Recycling Services, which all saw growth above the overall core clean economy average. Business Services relating to Green Technology are a major part of the cluster's total employment, also demonstrating faster than average growth rates.

“ The region also experienced the third highest overall expansion in core clean sectors, translating to more than 18,000 new jobs for Orange County. ”

Employment Change by Clean Economy Segment for Orange County, 2011-2012



Source: Next 10 2013 California Green Innovation Index



WORKFORCE HOUSING IN ORANGE COUNTY

In order to ensure plentiful housing options for Orange County's workforce, new housing development must meet projected employment trends and produce a market sensitive to workforce income levels.

WORKFORCE HOUSING IN ORANGE COUNTY

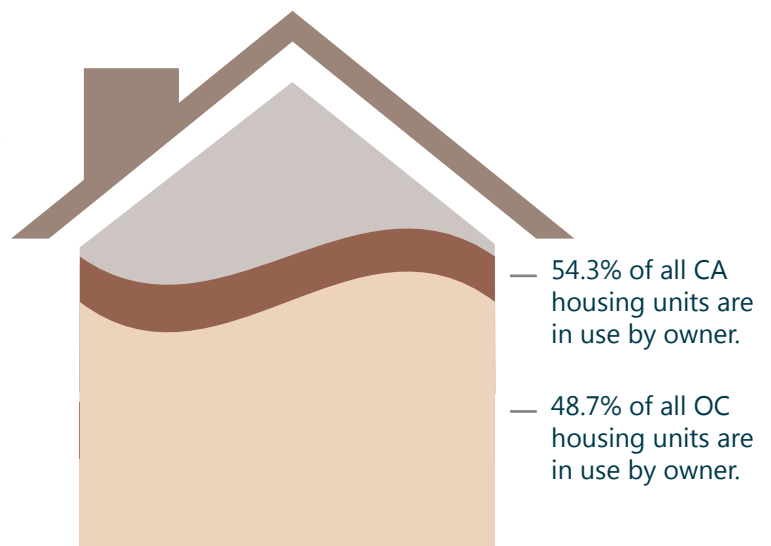


WHY IS THIS AN ISSUE?

Orange County's housing costs — including apartment rental rates — rebounded and are higher than those of neighboring counties, peer regions of other states, and the national average. A region's housing supply must keep pace with long-term population and job growth in order to balance job creation with the region's ability to house a growing workforce. Orange County has typically remained a net importer of workers from surrounding counties. A lack of sufficient workforce housing options can cripple regional economic development by forcing Orange County residents to seek employment elsewhere, including skilled young adults permanently moving out of state to areas with lower housing prices. Increasing the supply and availability of workforce housing options has become an increasingly important economic development tool following the Great Recession's impacts on wage, income and household wealth trends.

Orange County policymakers and leaders can create informed strategies to address the most pressing housing needs in the region by gaining an in-depth understanding of current and projected housing supply trends, rental rates, worker income levels, and affordability.

“ Behind only San Francisco County and Santa Clara County, Orange County is the third most expensive place to live in California and remains one of the most expensive places in the nation to buy a home. ”



HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Orange County has long held the reputation of being one of the most expensive home-buying regions in the nation, holding this title even during significant economic downturns. While long-term workforce housing demand continues to grow because of job creation and population growth, few new housing units were constructed during and just after the Great Recession. Home prices rebounded dramatically since the start of 2013, turning around the Southern California real estate market. Residential building permit activity in Orange County increased by nearly 50 percent from 2013 to 2014.

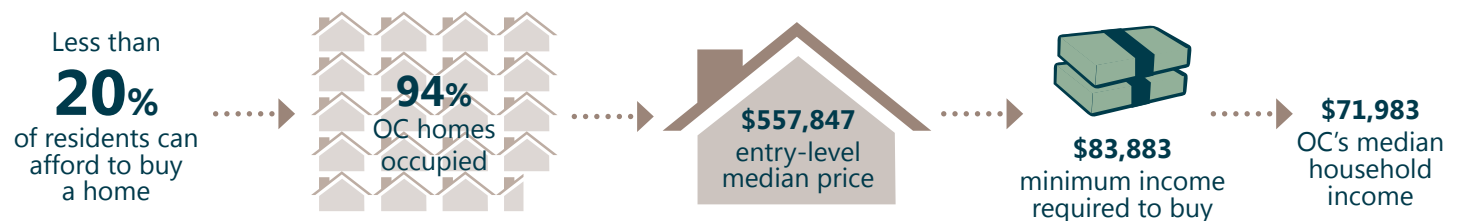
With solid employment growth and declining unemployment rates, Orange County unfortunately once again finds itself back in a workforce housing deficit position. Both supply and affordability are primary concerns. Average rental rates trend higher than in peer regions, and the proliferation of high-end housing prices force out recent graduates and those with difficulty finding employment with wages capable of sustaining an Orange County livelihood. The wide-reaching effects of workforce housing provision will impact the availability of workforce talent and can limit the county's employment growth and economic development potential if unaddressed. Orange County's high cost of living impacts migration and new resident inflows, and continues to pressure struggling residents to consider locating outside of the region. Without affordable housing options for young adults, the development of an increasingly skilled workforce to fuel continued growth in emerging high-growth clusters may not come to fruition.

“ Without affordable housing options for young adults, the development of an increasingly skilled workforce to fuel continued growth in emerging high-growth clusters may not come to fruition. ”

HOME OWNERSHIP

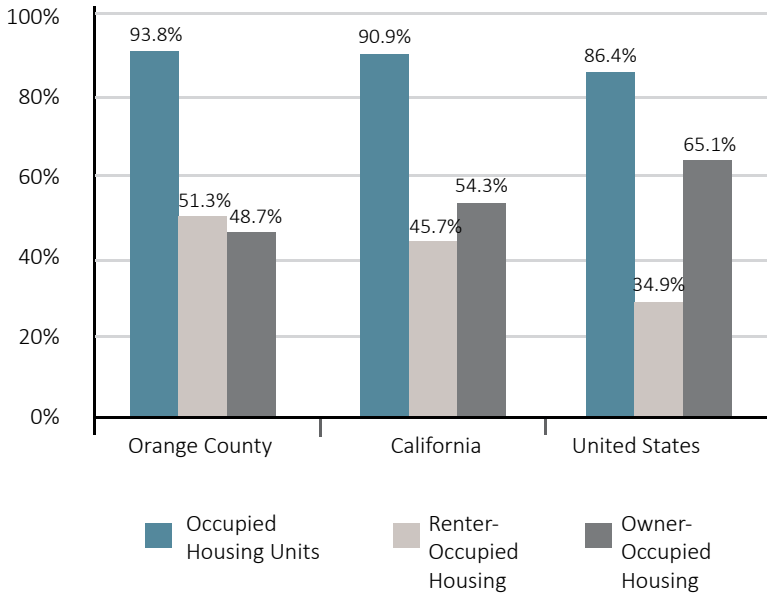
According to the American Community Survey, 56.9 percent of Orange County units are owner-occupied, while 43.1 percent are renter-occupied units in 2012. In general, Orange County has a smaller percentage of homeowners than at the state and national level, with only 48.7 percent of all occupied housing units in use by owners compared to 54.3 percent in California overall in 2013. Despite a higher concentration of renters, Orange County sports far fewer vacancies than California and the United States, with nearly 94 percent of all housing units occupied.

In April 2014, the California Association of Realtors (CAR) estimated that the Orange County median price of an existing single-family detached home was \$679,820 — a 4 percent increase over April 2013's median price of \$653,740 — indicating a slowing rate of increase from the previous 12 months when home prices jumped dramatically.



CAR's Housing Affordability Index is another clear indicator of Orange County's rebounding housing market and rising prices. It measures the percentage of households that are capable of purchasing an entry-level median priced home in a given region. The Affordability Index for Orange County fell by 11 points year-over-year to a score of 28 in the first quarter of 2013, and affordability has continued to decline each quarter. The county scored 19 for Q1 2014, down one point from the previous quarter, and 11 points below Q1 2013. Essentially, the index indicates that less than 20 percent of Orange County residents can afford to purchase a home in Orange County at the median price level.

Housing Occupancy



Source: U.S. Census Bureau

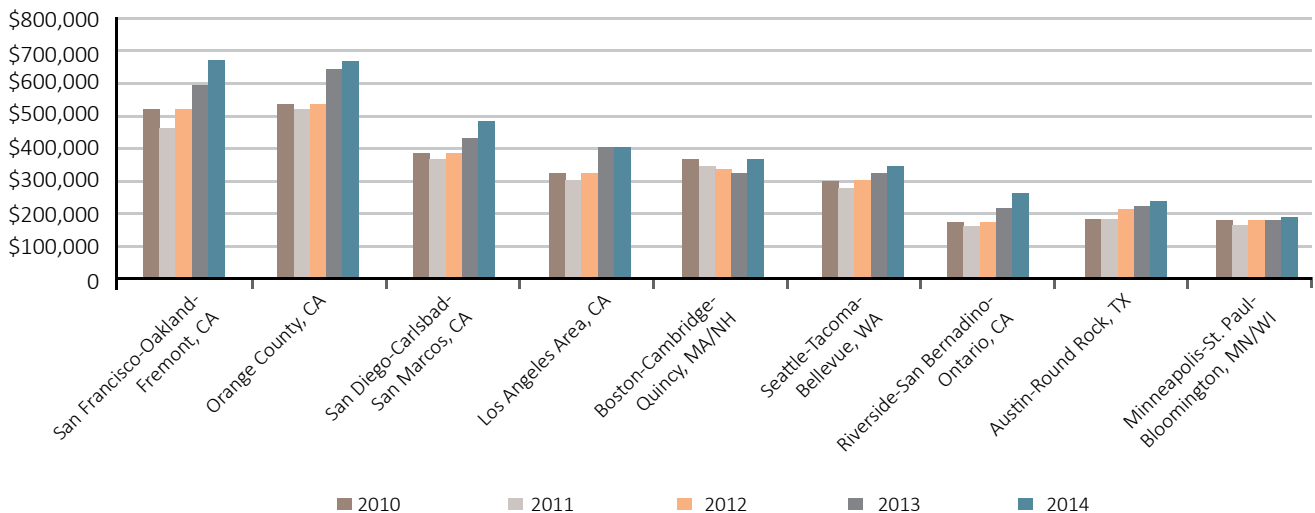
Similarly, the First-Time Buyer Index measures the percentage of rental household residents that can afford to transition from rental living to purchasing an entry-level home in a given region. CAR considers this index to be the most fundamental measure of housing market quality and accessibility for new buyers. As of Q1 2014, CAR's scored Orange County First-Time Buyer Index at 44, meaning 44 percent of new Orange County home buyers can afford to purchase an entry-level home — a slight 5-point decline from Q1 2013's index. Orange County is far below the Housing Affordability Index scores of California (56) and the United States (77) for Q1 2014. At Q1 2014 an estimated entry-level price of \$577,847, with first-time home ownership in Orange County requiring a minimum qualifying income of \$82,883 — up nearly \$10,000 from 2013.

ORANGE COUNTY MUST BUILD HOUSING TO KEEP UP WITH DEMAND

Residential building permit activity in Orange County increased by nearly 50 percent from 2013 to 2014.



Median Single-Family Home Price by Metropolitan Statistical Area 2010-2014, Orange County vs. National Peers

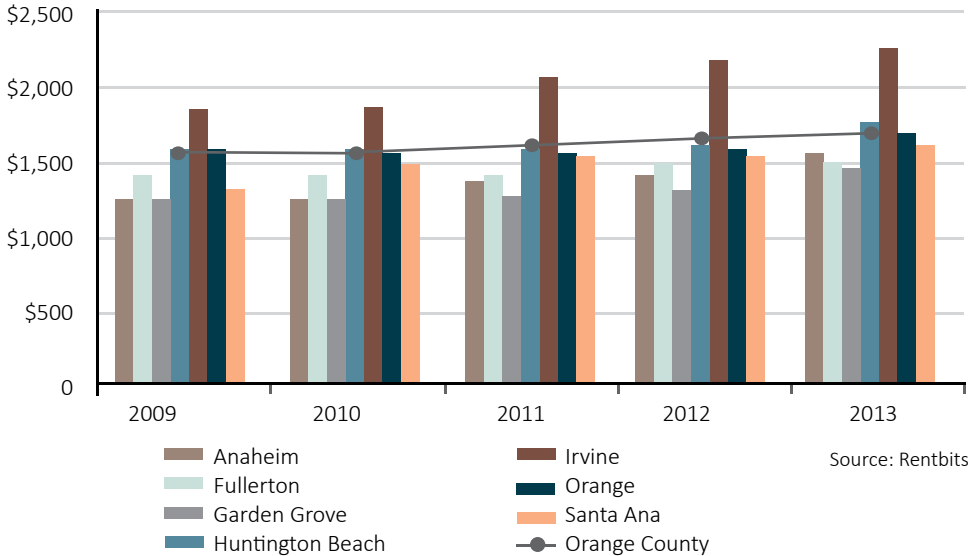


Source: National Association of Realtors

Note: Data from National Association of Realtors is of Single Family Home Prices while California Association of Realtors data is of all homes, single family as well as condominiums and town-homes.

Average apartment rents for Orange County spiked as the economy continues to recover and home prices increase. The overall average monthly rental rate for 2013 was \$1,682 — an increase of nearly 5 percent in the last year. Irvine commands the highest rent rates in Orange County, while Garden Grove, Fullerton and Anaheim are among the most inexpensive rental markets.

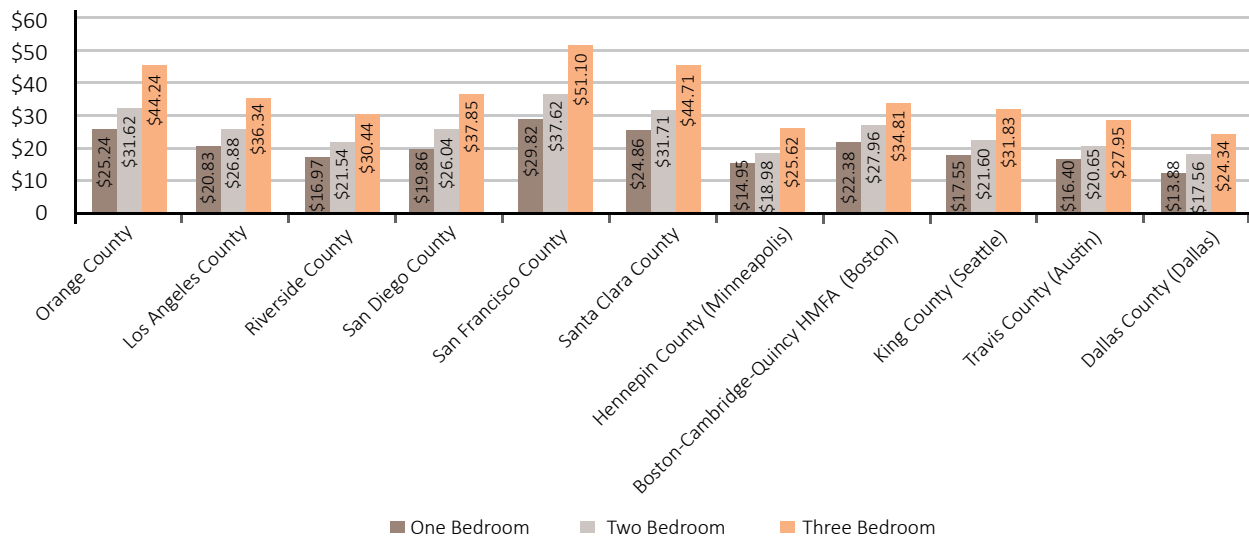
Average Annual Rent by City, 2009-2013



The Housing Wage, defined by the National Low Income Housing Coalition (NLIHC) as the minimum wage required to afford rental housing for specific family sizes, ranges from \$25.24 per hour for a one-bedroom apartment to \$44.24 per hour for a three-bedroom apartment in Orange County. These rates have increased steadily since 2000, when Orange County's required wages for fair market rent ranged from \$15.23 per hour for one-bedroom apartments to \$20.86 per hour for three-bedroom apartments.

Compared to other peer counties, Orange County is second only to San Francisco County in one-bedroom wage requirements and behind Santa Clara and San Francisco counties in two- and three-bedroom affordability wages. The hourly wage needed for a one-bedroom apartment of \$25.24 is equivalent to an annual income of about \$52,500, while the annual renter income needed to afford a two-bedroom apartment at fair market rent is \$65,770.

Hourly Wage Needed to Afford Fair Market Rent in 2014
Orange County vs. National Peers



Source: National Association of Realtors



WORKFORCE INDICATORS REPORT PARTNERS

A product of the research partnership between Orange County Business Council, County of Orange, and Orange County Workforce Investment Board, the Workforce Indicators Report examines the growth of industry and employment, salary and wage trends, demographic changes and the educational attainment of Orange County students.

ORANGE COUNTY BUSINESS COUNCIL

EXECUTIVE COMMITTEE

CHAIR

Les Card, LSA Associates, Inc.

CHAIR ELECT

Laura DeSoto, Experian

IMMEDIATE PAST CHAIR

Michael Hornak, Rutan & Tucker LLP

TREASURER

Robert Mayer, Jr., The Robert Mayer Corporation

PRESIDENT, CHIEF EXECUTIVE OFFICER AND SECRETARY

Lucetta Dunn, Orange County Business Council

CO-CHAIR, ADVOCACY AND GOVERNMENT AFFAIRS

Alice Bisno, Automobile Club of Southern California

CO-CHAIR, ADVOCACY AND GOVERNMENT AFFAIRS

Lisa Haines, Disneyland Resort

CHAIR, ECONOMIC DEVELOPMENT

Juan Basombrio, Dorsey & Whitney LLP

CHAIR, INFRASTRUCTURE

Maureen Hayes, Parsons

CHAIR, MEMBERSHIP/INVESTOR RELATIONS

Laura DeSoto, Experian

CHAIR, CEO LEADERSHIP CAUCUS

Thomas Phelps, Manatt, Phelps & Phillips LLP

CO-CHAIR, LEGAL AFFAIRS

Jeffrey Reeves, Gibson, Dunn & Crutcher LLP

CO-CHAIR, LEGAL AFFAIRS

Jon Frank, Snell & Wilmer

CHAIR, RESEARCH AND COMMUNICATIONS

Steve Churm, Freedom Communications and OC Register

CHAIR, STRATEGIC PLANNING

Michael Hornak, Rutan & Tucker LLP

CHAIR, WORKFORCE DEVELOPMENT

Richard Porras, AT&T

CHAIR, WORKFORCE HOUSING

Shari Battle, Bank of America

CHAIR, CITY PARTNERS

Dan Miller, The Irvine Company

BOARD OF DIRECTORS

Javier Angulo, Walmart

Robert Bein, RBF Consulting

Joe Brennan, Fluor Corporation

Charles Bullock, Brandman University

Damon Burrows, Allergan Inc.

Ronald DiLuigi, St. Joseph Health System

John Erskine, Nossaman LLP

Adrian Foley, Brookfield Residential

Kristy Hennessey, Time Warner Cable

Joe Hensley, U.S. Bank

Hector Infante, Chevron

Jena Jensen, CHOC Children's

Lynn Jochim, FivePoint Communities

Darrell Johnson, Orange County Transportation Authority

Dan Kelly, Rancho Mission Viejo

Don Kennedy, First American Title Company

Michael Kraman, Transportation Corridor Agencies

Gregory Leet, University of California, Irvine

Noel Massie, UPS

Al Mijares, OC Department of Education

Rob Myers, Wells Fargo

Robbin Narike Preciado, Union Bank

Francisco Nebot, SchoolsFirst Federal Credit Union

Rick Nogueira, Chase

Kevin Payne, Southern California Edison

Philip Petrocelli, HNTB Corporation

Julie Miller-Phipps, Kaiser Permanente Orange County

Anil Puri, Ph.D., California State University, Fullerton

Nina Robinson, Hoag Memorial Hospital Presbyterian

Jeff Roos, Lennar Homes

Joe Ruggiero, Verizon Wireless

Rodger Schwecke, Southern California Gas Company

Mark Simons, Toshiba America Information Systems Inc.

Frank Talarico Jr., Goodwill of Orange County

CHAIRMAN'S CEO LEADERSHIP CAUCUS

Richard Afable, Hoag Memorial Hospital

Michael Colglazier, Disneyland Resort

Richard Davis, US Bank

James Doti, Chapman University

Ski Harrison, Rutan & Tucker LLP

Paul Kaufman, Chase

Parker Kennedy, First American Financial Corporation

Jim Mazzo, AcuFocus

Tom McKernan, Automobile Club of Southern California

Victor Nichols, Experian

Mel Rogers, PBS SoCal

Dan Young, Irvine Community Development Company

ORANGE COUNTY WORKFORCE INVESTMENT BOARD

EXECUTIVE COMMITTEE

CHAIR

Bob Bunyan, The Arlington Group

VICE-CHAIR

Tod Sword, Southern California Edison

2ND VICE CHAIR

Tom Porter, Kawaski Motors Corp, USA

BOARD OF DIRECTORS

Jim Adams, L.A./O.C. Building Trades

Dr. Loretta Adrian, Coastline Community College

Peter Agarwal, Citizens Business Bank

Maria-Jean Caterinicchio, Memorial Care Medical Centers

Euiwon Chough, Chough and Associates

Rob Claudio, California Employment Development Department

Janelle Cranch, California School Employees Association

Ronald DiLuigi, St. Joseph Health Systems

Jamie Latiano, Thales Group

Fred Flores, Diverse Staffing Solutions

Lauray Holland Leis, The Irvine Company

Kenneth Howe, Equity Residential

Alireza Jazayeri, 3P Consulting

June Kuehn, State Department of Rehabilitation

Kevin Landry, New Horizons Computer Learning Centers of Southern California

Darlene Le Fort, Coastline Regional Occupational Program

Barbara Liddy, Teamsters Union Local 396

John Luker, Orange County Rescue Mission

Doug Mangione, International Brotherhood of Electrical Workers

Barbara Mason, The Boeing Company

Gary Matkin, University of California – Irvine

Ernesto Medrano, Teamsters Union Local 952

Robin Murbach, Republic Services

Dr. Randy Pebbles, South Orange County Community College District

Bonny Perez, Solmar Legacy, Inc.

Julio Perez, OC Labor Federation

Adalberto J. Quijada, U.S. Small Business Administration

Clarence (Buddy) Ray, Community Action Partnership of Orange County

Michael Ruane, CalOptima

Paula Starr, Southern California Indian Center

Frank Talarico, Goodwill of Orange County

Thomas Tassinari, Synergy Solutions

Ed Tomlin, Renaissance ClubSport

Kay Turley-Kirchner, Kirchner Consulting

Yasith Weerasuriya, Stanbridge College

Alan Woo, Community Action Partnership of Orange County/BOS Representative

Ruby Yap, Yap and Little

ACKNOWLEDGMENTS

DATA SOURCES

Brookings Institution
California Department of Education, Educational Demographics Unit
California Department of Finance
California Department of Finance, Demographic Research Unit
California Employment Development Department
California EDD, QCEW Dataset
California State University, Fullerton
CSUF, Center for Demographic Research
CSUF, Institute for Economic and Environmental Studies
Chapman University
DataQuick
Los Angeles Economic Development Corporation
National Association of Realtors
National Low Income Housing Coalition
Next 10, California Green Innovation Index
O*NET OnLine
Orange County Workforce Investment Board, IT Environment Scan
Otis College of Art and Design
Rentbits
U.S. Bureau of Labor Statistics
U.S. Bureau of Labor Statistics, Employment Situation of Veterans
U.S. Bureau of Labor Statistics, Occupational Employment Statistics
U.S. Census Bureau, 2010 Census
U.S. Census Bureau, American Community Survey
U.S. Census Bureau, Population Estimates Program
U.S. Census Bureau, State and County Quick Facts
University of California, Irvine
Urban Explorer, Inc. and work2future: EconoVue

SPECIAL THANKS FOR THEIR THOUGHTFUL CONTRIBUTIONS TO THIS REPORT

Karen Roper, Director, Orange County Community Services
Andrew Munoz, Executive Director, Orange County Workforce Investment Board
Julie Elizondo-Oakley, Deputy Director, Orange County Workforce Investment Board
Jolie Sheppick, Special Projects Manager, Orange County Workforce Investment Board
Lucy Dunn, President and CEO, Orange County Business Council

STATE OF THE COUNTY WORKFORCE 2014 PROJECT TEAM

Dr. Wallace Walrod, Chief Economic Advisor, Orange County Business Council
Alicia Berhow, Vice President of Workforce Development and Advocacy, Orange County Business Council
Delaine Moore, Communications Manager, Orange County Business Council
Paul Jones, Economic Research Assistant, Orange County Business Council
Patty Conover, Communications Specialist, Orange County Business Council
Pete Walrod, Economic Research Assistant, Orange County Business Council

Orange County Business Council
Orange County Workforce Investment Board

THANK YOU SPONSORS

Presenting Sponsor



Gold Sponsor



Silver Sponsor

AT&T
Southern California Edison
Wells Fargo