2015-2016 Orange County

Workforce Indicators Report

Table of Contents

October 8, 2015

Dear Workforce Development Partner:

Orange County Business Council (OCBC) and the Orange County Workforce Investment Board (OCWIB) are pleased to present the 14th annual "2015-2016 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.

Orange County's trifecta of a high quality of life, a diverse economy, and a well-educated workforce has propelled the county to lead the region in growth and prosperity. However, a growing and persistent skills gap threatens continued success. Even as unemployment rates continue to drop, employers face rising difficulties in filling positions with skilled, educated workers. Last year's report focused on the economic trends shaping the past decade of workforce development. This year's report continues with that research as Dr. Wallace Walrod, OCBC's Chief Economic Adviser, explores how to close the skills gap for businesses. Three industry clusters in particular are likely to face the most significant pressure from a skills gap perspective: Advanced Manufacturing, Health Care, and Information Technology. This is a troubling trend given these three are key drivers of future economic development and workforce development success in Orange County.

To tackle this issue, 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 in order to close the achievement gap.

The theme for this year's conference is "Bridging the Workforce Gap: What Business Needs to Know." 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,

Lucy Dunn
President and CEO
Orange County Business Council

Bob Bunyan
2015 Chair
Orange County Workforce Investment Board

TODD SPITZER
CHAIRMAN, BOARD OF SUPERVISORS
SUPERVISOR, THIRD DISTRICT

ORANGE COUNTY HALL OF ADMINISTRATION
333 W. SANTA ANA BLVD., SANTA ANA, CALIFORNIA 92701
PHONE (714) 834-3330 FAX (714) 834-2786
Todd.Spitzer@ocgov.com

Dear Friends,

On behalf of the Orange County Board of Supervisors, I am pleased to announce this year's Orange County Workforce Indicators Report. Jointly developed through a long-standing partnership between the Orange County Workforce Investment Board and the Orange County Business Council, this report is now in its 14th year.

This year's report highlights the new legislation that makes publicly funded workforce development possible through the Workforce Innovation and Opportunity Act. The Act focuses on joining business and workforce and economic development professionals together for the purposes of getting the unemployed jobs and meeting business needs. This report identifies opportunities where business and workforce development can come together to strengthen our economy.

The Workforce Indicators Report reveals the critical need for bridging skill gaps among youth and the Millennial generation. Even with very low unemployment rates, this group is disproportionately affected by lacking skills that employers are seeking. The report also features the top emerging industries for the region and how they can help Orange County keep a competitive edge in a post-Recession economy. This report, in conjunction with the annual Orange County Comprehensive Economic Development Strategy, provides the information and analysis for the public and private sector alike to shape future policies, services and investments in the region. These reports are also a wealth of current, reliable data and information for the purposes of pursuing grant funding for local non-profits and other service organizations. These reports are easily accessible to the public through the Orange County Workforce Investment Board's website at www.ocwib.org.

The Board congratulates the Orange County Workforce Investment Board and the Orange County Business Council on the 2015-16 Workforce Indicators Report.

Sincerely,

Todd Spitzer, Third District Supervisor
Chairman, Orange County Board of Supervisors

Introduction: 2015-2016 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.

Introduction

The 2015-2016 Orange County Workforce Indicators Report covers multiple facets of the Orange County economy – demographics, industry clusters, education and training, workforce housing – to provide stakeholders with the information they need to make informed decisions about the county's present and future economic climate. The ever-changing 21st century global economy means that policymakers and stakeholders must understand shifting labor market trends in order to implement workforce development programs that will ensure future prosperity. This report presents key information about these trends in an accessible package that stakeholders can use as is or as a starting point for further research.

The goal of this report is to help both county stakeholders and the general public understand the key economic and workforce drivers that continue to put Orange County in the driver's seat of the Southern California economy. Orange County's unique attributes – its high quality of life, diverse and well-educated workforce, and competitive business environment – allowed it to recover from the Great Recession quicker than neighboring counties and peer regions across the nation. In fact, Orange County has become the economic engine of the greater Southern California area, driving economic and employment growth in surrounding regions as well as in the county itself.

Orange County's unemployment rate fell to 4.3 percent as of June 2015, representing a decrease of 2.5 percent compared to the June 2013 rate and a decrease of 1.2 percent compared to June 2014. Additionally, Orange County created 45,500 jobs in the last year and approximately 65,000 jobs since June 2013, led by employment gains in Health Care, Professional & Business Services, Construction, and Manufacturing. While Orange County experiences tremendous jobs recovery since the Great Recession ended and enjoys the lowest unemployment rates in Southern California — and one of the lowest in the state — surrounding peer counties have also have fared well in the last year in terms of job growth.

Three industry clusters are likely to face the most significant pressure from a skills gap perspective – Advanced Manufacturing, Health Care, and Information Technology. These three sectors are key drivers of future economic development and workforce development success in Orange County due to their ability to create well-paying jobs and economic growth due to high multiplier effects. The "Sector Spotlights" section of this report, found on page 54, which provides a detailed review of current trends in these key industry sectors.

Orange County's skills gap disproportionately affects the Millennial generation, defined in this report as those currently aged 18 to 34. Millennials, currently the largest demographic in the US labor force, face a wide variety of obstacles, from student debt to low participation in the workforce during the Recession years. While the number of STEM-related undergraduate and graduate degrees has steadily risen since 2000, they currently make up only 20 percent of all degrees awarded in Orange County and this may not be enough to support the increasing growth of STEM-related industries in the county. Residents aged 20 to 24 have an unemployment rate of 11.5 percent, much higher than the countywide average of 6.5 percent and a widening skills gap will only increase Millennial unemployment and disengagement from the workforce. In addition, the county's high cost of living – Orange County ranks third in California (behind only San Francisco and Truckee-Nevada counties) and 7th nationally, according to the 2014 Cost of Living Index (Council for Community and Economic Research) – encourages young people, including highly-skilled young professionals, to move to less expensive areas and threatens the county's future economic vitality.

Additionally, four emerging industry clusters – International Trade, Information Technology, Creativity, and Green Technology – offer promising pathways forward for the county's economy and offer the potential for employment growth and career advancement, especially among Millennials currently breaking into the job market. Each cuts across multiple industries to drive economic growth. Creativity-related occupations, for example, impact a wide variety of businesses through marketing and design. These cross-cutting industry clusters are particularly important for the Orange County economy because each draws from existing county strengths:

International Trade-benefits from Orange County's diverse population, globally prominent companies, and renowned educational institutions that bring in students from around the globe.

Informational Technology benefits from Orange County's highly-skilled workforce and status as a leader in emerging, innovative technology industries.

Creativity benefits from Orange County's internationally successful entertainment companies such as Blizzard Entertainment and The Walt Disney Company.

Green Technology benefits from the presence of forward-thinking business incubators and venture capitalists in Orange County as well as the county's longstanding commitment to the environment and willingness to embrace alternative fuels.

County policymakers should focus on supporting these clusters' continued contributions to Orange County's economic growth. By drawing on the strengths of the county and its workforce, these four growing industry clusters can help retain a competitive advantage in the post-recession economy. Policy should respond to these trends and others in order to ensure that Orange County remains a regional, national, and global center for economic and technological innovation.

The report also features indicators analyzing specific notable segments of Orange County's workforce. For example, Orange County veterans, who bring many in-demand leadership and technology skills to the workplace, face much higher rates of unemployment and disengagement from the job market than their civilian counterparts. The Millenial generation, as well as low-skill workers, have been disproportionately impacted by recent trends towards automation.

The Orange County Workforce Indicators Report at a Glance: How to Use This Report

The 2015-2016 Orange County Workforce Indicators report comprehensively analyzes Orange County's dynamic workforce trends. The 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, individual, or stakeholder interested in learning more about Orange County and its current and projected economic and workforce climate. Industry cluster and occupational analyses 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. Current to mid-year 2015, the demographic data used in the report is not only an ideal starting point for exploratory research on the 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:

- **Planning** – City planners and policymakers alike can learn the facts about Orange County's demographic trends, housing market, and education system needed 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 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** – The Workforce Indicators Report's many facets of analysis can be utilized by non-profits and other organizations as compelling evidence for grant funding pursuits within a wide variety of investment areas.

- **Business Decision-Making** – The Workforce Indicators report is a tool in which current or aspiring business owners can find many useful data points and insights regarding industry and occupation trends and the regional consumer population demonstrating the vibrancy of the Orange County 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. As a comprehensive source of high-quality data, 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 looks to provide a current picture of the regional economy and its strategic possibilities, demonstrating the region's potential as a receptive and thriving market in which to do business. The 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

The Orange County Workforce Investment Board's (OCWIB) Economic Indicators Dashboard (oceconomy.org) provides an online companion to the 2015-2016 Workforce Indicators Report. Through a partnership between OCWIB, the County of Orange, and OCBC, the website provides a series of regularly updated analyses of the county's economic and workforce environment. Within each of these categories, oceconomy.org contains a broad gathering of information that includes both empirical data as well as indices of population, employment, economic development, workforce development, consumer, business and housing market confidence. For monthly updates on these and other important Orange County indicators, please visit oceconomy.org.

OC Network

Orange County Regional Economic and Workforce Development Network (the Network) serves as a mechanism to promote effective communication and on-going collaboration across systems in the Orange County Region (OC Region) that enhance a regional approach for partnership development; such as workforce and economic development, education and training, centralized labor market information, and industry investments.

To sustain continued economic growth, Orange County built the "OC Network" to support seamless and integrated countywide initiatives. This Network leverages public partnerships and industry sector champions to direct public-private joint planning on investments affecting the OC Region. The Network strives to utilize the County's natural strengths, innovative spirit, high quality of life, desirable geography and receptiveness to incorporating a diverse mix of stakeholders to prepare for a future-ready region. With continued focus and diligence, Orange County can become a leader in collaboration and harnessing of resources critical to our regional prosperity.

The primary activities of the Network include centralizing communication and labor marketing information by facilitating: structured partnership endeavors; idea incubators; pursuits of multiple funding streams; responding to industry needs; and testing new innovative models.

A recently funded State initiative referred to as "Slingshot" is a natural outgrowth of the Network's work thus far. The Slingshot initiative supports the Network's mission in creating systems that implement regional projects addressing issues ranging from serving targeted populations to enhancing economic vitality. This State supported endeavor is an endorsement of our regional efforts by the Governor's office and the California Workforce Development Board.

Network members include workforce development professionals; business leaders; industry associations; economic development professionals; educators; nonprofit community organizations; labor representatives; and other public/private sector professionals.

For more information, or to join the Network contact:
OCWIB: 714-480-6500 or OCNetwork@occr.ocgov.com

Workforce Innovation And Opportunity Act

President Barack Obama signed the Workforce Innovation and Opportunity Act (WIOA) into law on July 22, 2014. WIOA supersedes the Workforce Investment Act of 1998 and amends the Adult Education and Family Literacy Act, the Wagner-Peyser Act, and the Rehabilitation Act of 1973. In general, the Act took effect on July 1, 2015, the first full program year after enactment. WIOA is designed to help job seekers access employment, education, training, and support services to succeed in the labor market and to match employers with the skilled workers they need to compete in the global economy. Congress passed the Act by a wide bipartisan majority; it is the first legislative reform of the public workforce system in more than fifteen years. WIOA brings together, in strategic coordination, the core programs of federal investment in skill development:

- Employment and training services for adults, dislocated workers, and youth
- Wagner-Peyser employment services administered by the Department of Labor (DOL) through formula grants to states
- Adult Education and literacy programs and Vocational Rehabilitation state grant programs that assist individuals with disabilities in obtaining employment administered by the Department of Education (DoED)

In addition to core programs, WIOA also authorizes programs for specific vulnerable populations, such as: Job Corps; Veterans; YouthBuild; Indian and Native American programs; Migrant & Seasonal Farmworker programs; programs administered by DoED; programs administered by Department of Health and Human Services (HHS); and evaluation and multistate projects administered by DOL.

The new law places an emphasis on greater coordination and alignment in job seeker services, business services, economic development and training strategies. It also redefines how Local Workforce Investment Areas (LWIAs) should be structured and designated by the states. There are many new areas of focus in the law that could greatly benefit the system; however some of these also require a shift in thinking, execution, priority and logistics for the Orange County region.

Over the last several years, the Orange County Workforce Investment Board (OCWIB) has built a forward thinking system to address the workforce development challenges of Orange County. The OCWIB fostered collaboration across a wide range of stakeholder interests, including those of business, labor, education, social services, philanthropy, non-profits and community based organizations. The Board focused on positioning work to leverage priority industry sectors, strategic partnerships, career pathways and collaborations to build a greater regional workforce system. These efforts, among others, garnered the OCWIB recognition and designation by the California State Workforce Investment Board as a High Performing Local Board. One of the chief criteria to receive this designation was the development of a strategic plan and demonstration of an implementation schedule for the plan.

With the new WIOA legislation upon us, the OCWIB took the same pioneering approach to develop a strategic plan and implementation schedule to support a seamless transition from WIA to WIOA. Realizing the monumental importance of the first legislative reform of the public workforce system in more than fifteen years, the OCWIB formed an Ad Hoc Committee dedicated to preparation and implementation through this transition process. Headed by an OCWIB business member from the private sector, the WIOA Ad Hoc Committee includes workforce and economic development partners, One Stop partners, education and non-profit representation. Through the work of the Ad Hoc Committee, the OCWIB has drafted a Transition Plan with a three phase implementation strategy. The Transition Plan recommends actions and strategies to promote initial implementation as well as on-going compliance. It was developed to serve as a roadmap for implementing new legislative requirements as the regulations for WIOA are finalized; and as State directives are issued; not a legislative mandate, but a proactive response to the new legislation.

The formation of this committee, the finalization and implementation of the Transition Plan have been expedited in part due to the solid framework established by the Orange County regional collaboration known as the "Network"; making the Orange County Region one of the few across the country to already be implementing the new legislation into daily operations.

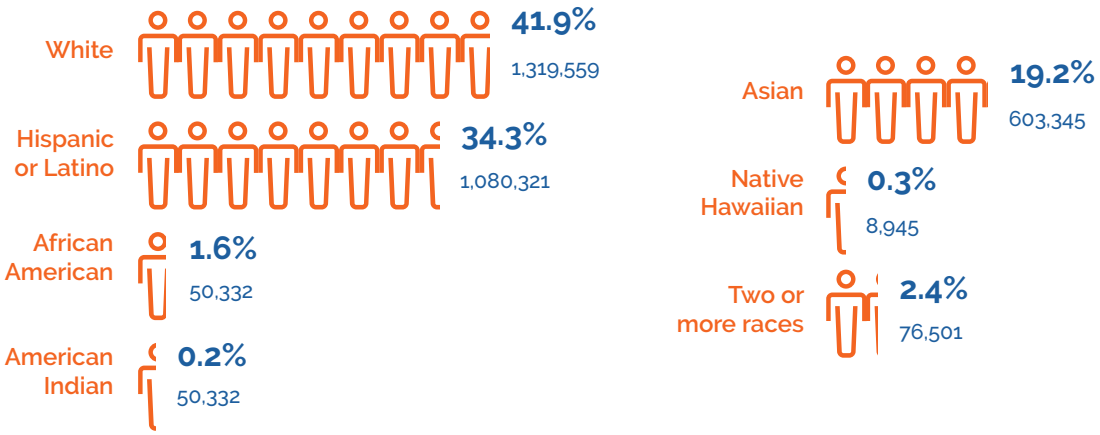
Section 2: Demographic Trends

Orange County's demographic composition shows a more diverse, rapidly aging population compared to state and national averages. Regional civic and business leaders can use these facts to plan around the county's shifting population trends and guide Orange County's residents toward long-term economic success and prosperity.

Why Is This an Issue?

Orange County needs effective education and workforce training programs for its increasingly diverse and aging population. The county's aging population will require a broad range of healthcare and other social services, innovative housing options, and life enrichment programs to sustain its high quality of life and attractiveness to new residents. Meanwhile, its culturally diverse community and workforce has a critical need for English language proficiency programs and initiatives across all education levels – K-12, community college, and university – to prepare for current and future labor market demands.

Population by Selected Ethnicity



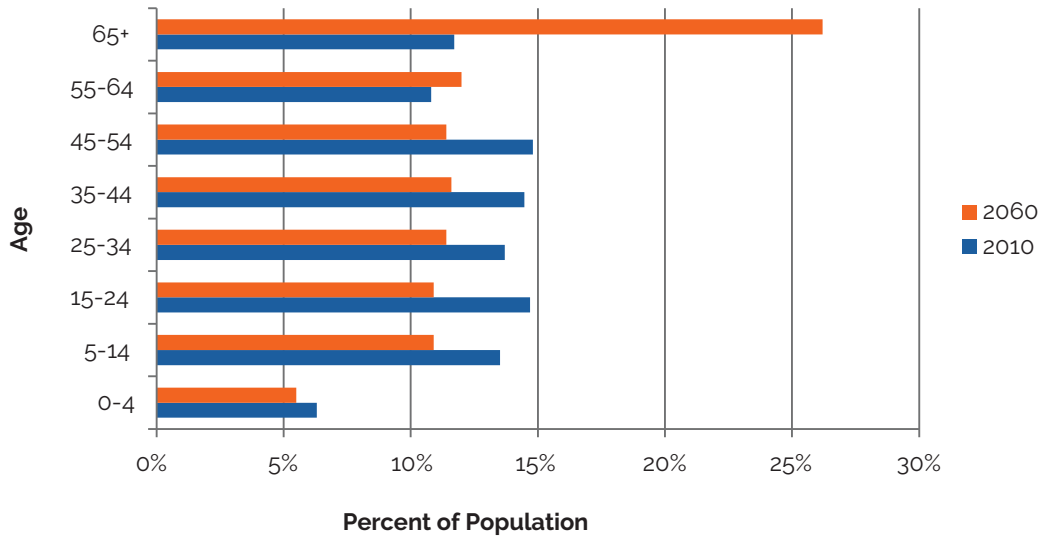
Source: U.S. Census Bureau, Population Estimates Program

How Do We Know This Issue Exists In Orange County?

Age Trends

The average Orange County resident is currently just over 37 years of age, with 25.6 percent of the county's population under 19 and 13.1 percent above 65. Compared to state totals, Orange County has a slightly larger proportion of working-age residents (20-64), a slightly smaller quantity of youths (5-19), 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 also indicate Orange County's larger concentration of active workforce participants. Projections over the next several decades show both a dramatic rise in Orange County's concentration of residents over the age of 65 and an associated drop in the relative proportion of all other age groups.

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



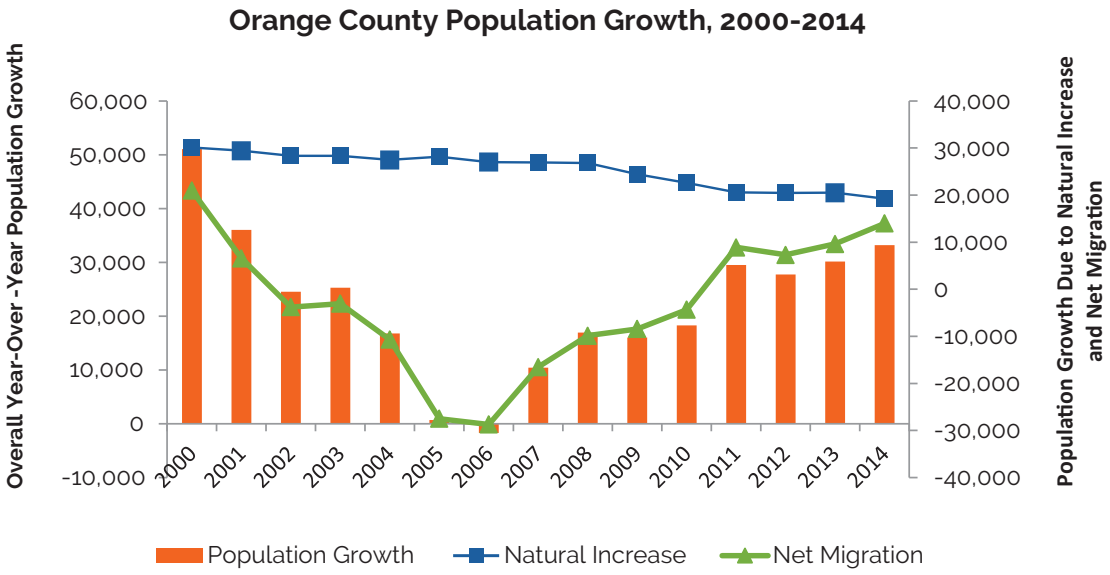
Source: State of California, Department of Finance

Population Growth

Orange County's population increased by approximately 600,000 over the last two decades; the majority of this growth occurred in the 1990s. The county has historically exceeded state and national population growth rates since 1950, but the population growth rate from 2000 to 2010 slowed to just above five percent. According to the U.S. Census Bureau, from 2010 to 2013, the county grew by an estimated 3.5 percent, once again surpassing the state average (2.9 percent.) The California Department of Finance estimates that between 2013 and 2014, the county grew by 26,494 residents, bringing the total population to just over 3.1 million. Additionally, from 2014 to 2015 the county added 33,446 residents, which brought the total population to an estimated 3,147,655, a 4.6 percent increase since 2010.

Historically, net population inflow (residents moving into Orange County from other states or California counties) has been the chief driver of Orange County population growth, especially between 1950 and 1980. In recent years, natural increase has become the dominant source of the county's population growth. After nearly 10 years of negative net migration growth between 2000 and 2010, Orange County experienced positive net migration growth in the current decade, with an 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. During the depths of the recession from 2008 to 2011, the rate of natural increase declined by roughly 8.5 percent each year. Population change from natural increase settled at roughly 20,041 from 2011 to 2012, decreasing to 18,836 from 2012 to 2013 and bouncing back to 19,219 from 2013 to 2014. Although economic recovery continues, rates of natural increase have yet to return to pre-recession levels. However, strong economic recovery has led to the return of positive net migration, which increased from 7,087 between 2012 and 2013 to 13,999 from 2013 to 2014.

> *From 2014 to 2015 the county added 33,446 residents, which brought the total population to an estimated 3,147,655.*



Source: California Department of Finance, Demographic Research Unit

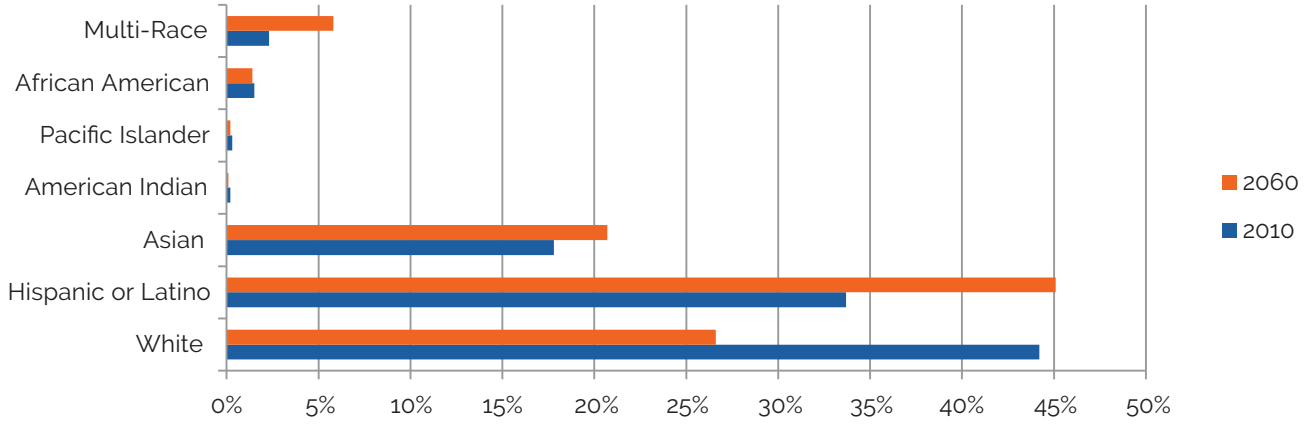
California State University, Fullerton's Center for Demographic Research (CDR) projects steady population growth for Orange County, which will plateau around 2030-2035. In 2015, the county's three most populous cities were Anaheim (351,433), Santa Ana (335,264) and Irvine (250,384). Of these three cities, Irvine experienced the highest population percentage growth, increasing by 17.9 percent between 2010 and 2015; Anaheim and Santa Ana achieved only 4.5 percent growth and 3.3 percent growth, respectively, while Orange County grew by just over 4.6 percent during the same time period.

Orange County's most populous cities

Ethnic Composition

Orange County is projected to become more ethnically diverse, with Latinos and Asians comprising an increasingly larger share of the county's population. Since 2005, Latinos accounted for more than 50 percent of the approximately 360,000 total births in the county, followed by Asians at 25 percent. Although Latinos comprise a higher proportion of the total population in the county (33.7 percent in 2010), the proportion of the Asian population increased at a greater rate in the last two decades. Overall, the Asian population increased by 115.8 percent from 1990 to 2010, compared to Latinos' increase of 79.3 percent.

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

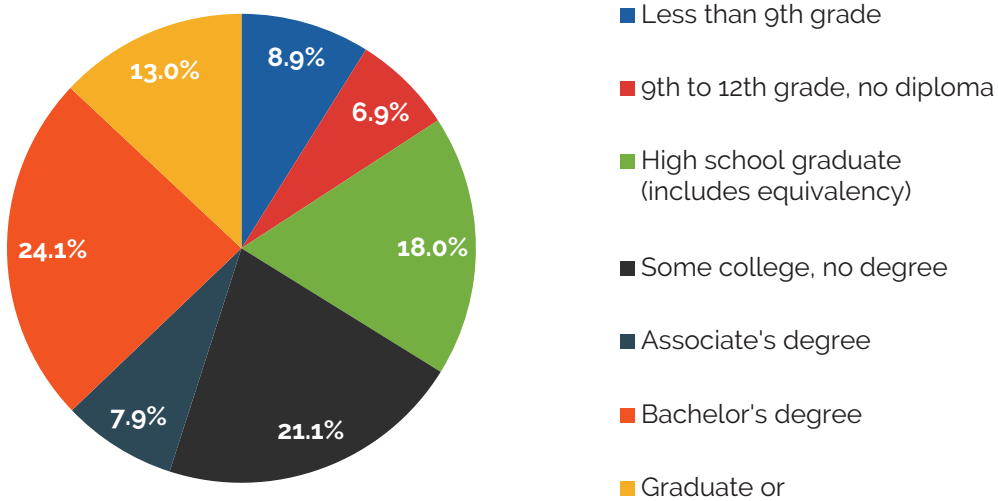


Source: State of California, Department of Finance

Educational Attainment and Income

A large proportion of Orange County residents are college-educated, with 45 percent of the population attaining at least an Associate's degree, which compares to state and national levels of 38.8 percent and 37.7 percent, respectively. An additional 21.1 percent of Orange County residents have obtained some form of collegiate training. However, nearly 16 percent of Orange County's population above the age of 25 has not obtained a high school diploma and almost one-third of adults have no post-secondary education. This demonstrates an ongoing need for educational pathways into well-paying jobs that require greater educational attainment. Orange County needs a better-educated, better-trained workforce in order to compete in the knowledge-based global economy.

Orange County: Educational Attainment of Population Age 25+, 2013



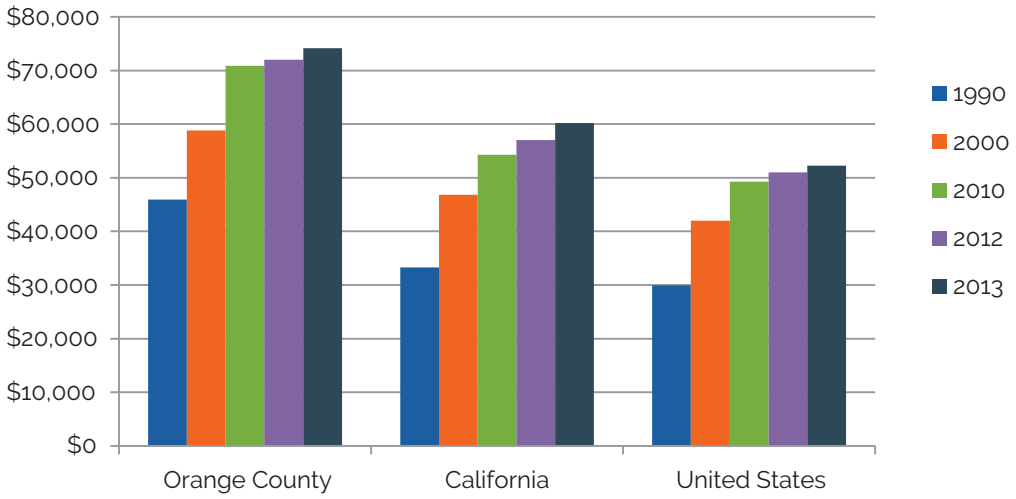
Source: American Community Survey

(Does not add up to 100% due to rounding)

Orange County needs a better-educated, better-trained workforce in order to compete in the knowledge-based global economy.

The median household income of Orange County residents is roughly $74,163, nearly $15,000 greater than the California state median income and more than $20,000 higher than the United States' median. However, income growth has been more gradual in Orange County, improving by only 1.6 percent between 2010 and 2012 and by 3 percent from 2012 to 2013. This is compared to state increases of 5 percent and 5.6 percent and national growth of 3.5 and 2.4 during these same periods. Orange County's slower growth is likely due to preponderance of low-paying, part-time service sector jobs created during this period.

Median Household Income Comparisons



Source: American Community Survey

OC Income Is High, but Growth Is Lower

Orange County		State		National	
+1.6%	+3.0%	+5.0%	+5.6%	+3.5%	+2.4%
2010-2012	2012-2013	2010-2012	2012-2013	2010-2012	2012-2013

Orange County

Median Income: $74,163

State

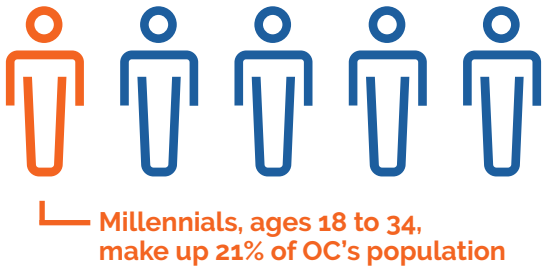
Median Income: $60,000

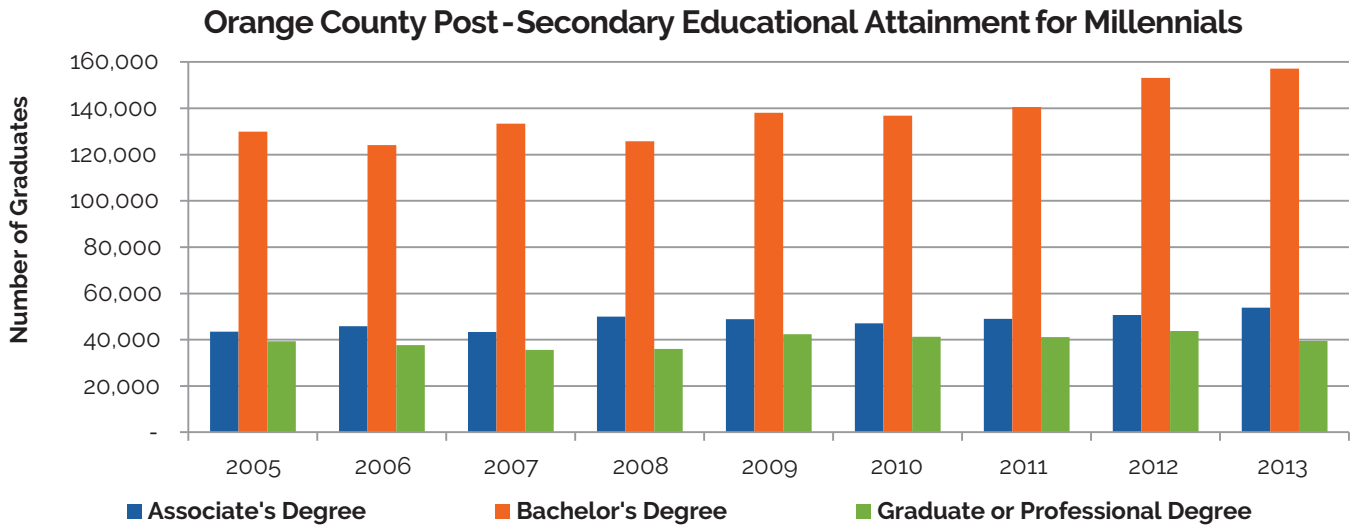
National

Median Income: $50,000

A Focus on Millennials

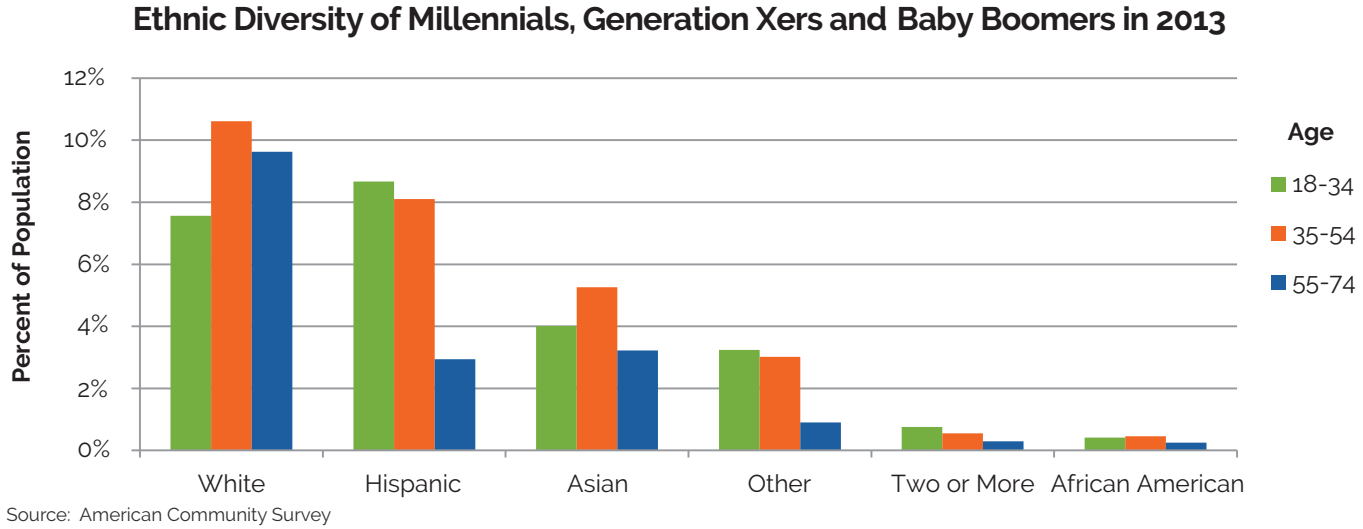
Millennials, often defined as those born between the early 1980s and early 2000s (i.e. currently aged about 18 to 34), are becoming an increasingly important group to the local and national economy as more and more baby boomers leave the workforce and Generation Xers approach retirement age. In 2014, Millennials totaled 672,331 in, approximately 21 percent of the county's total population, commensurate to the state (22.3) and national (20.8) percentage of Millennials over the past decade.





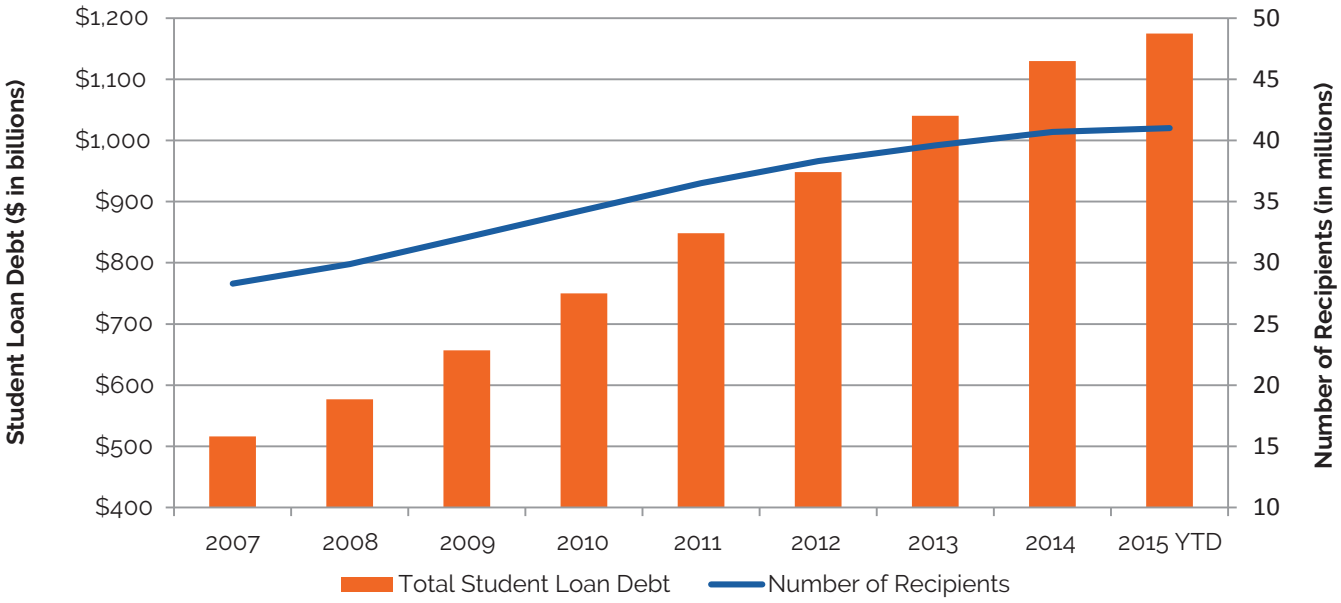
Source: American Community Survey

According to a recent Pew Research report released in May 2015, Millennials have surpassed Generation Xers, (i.e. often referring to as those born between the early 1960s and late 1970s, now aged 35 to 50), as the largest generation in the U.S. labor force. The Millennial workforce has experienced rapid growth in recent years due to continued immigration into the U.S.; more than half of immigrant workers who arrived in the last five years are Millennials. Additionally, younger Millennials have markedly higher post-secondary educational attainment than earlier Millennials or other generations. As these Millennials complete their education, they will enter the job market and help bolster the workforce by replacing older, retiring workers.



Source: American Community Survey

Total U.S. Outstanding Student Loan Debt



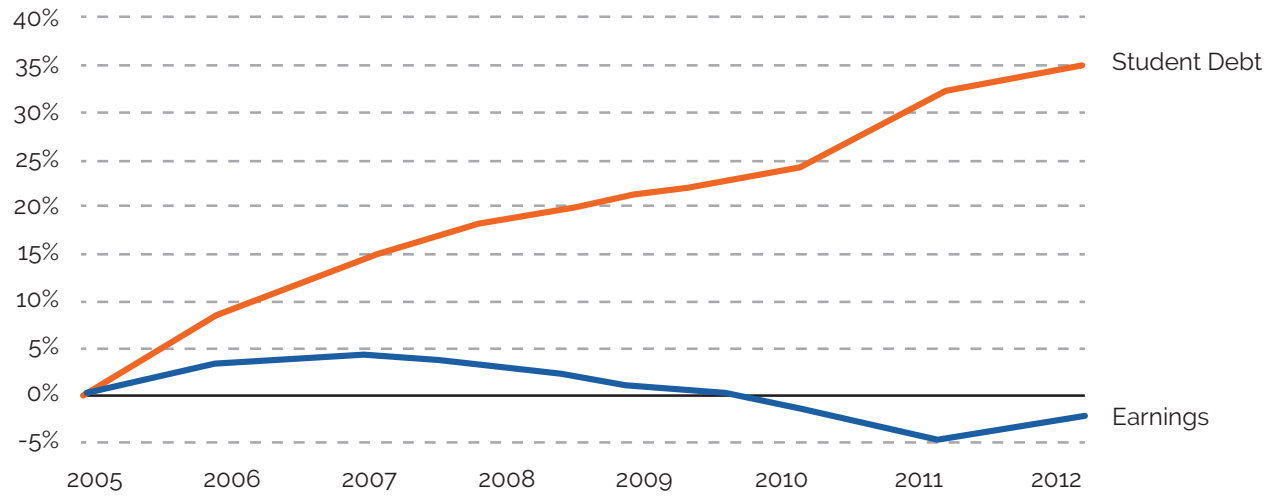
Source: National Center for Education Statistics

Millennials have faced tremendous career pressure entering the workforce during and after the Great Recession, which limited the number of positions in previously lucrative industries such as financial and business services. Due to this constricted job market, many Millennials decided to extend their time at school, advancing their education in hopes of becoming more competitive in the job market. This has had several major consequences, including a major rise in student debt.

Millennials have faced tremendous career pressure entering the workforce during and after the Great Recession.

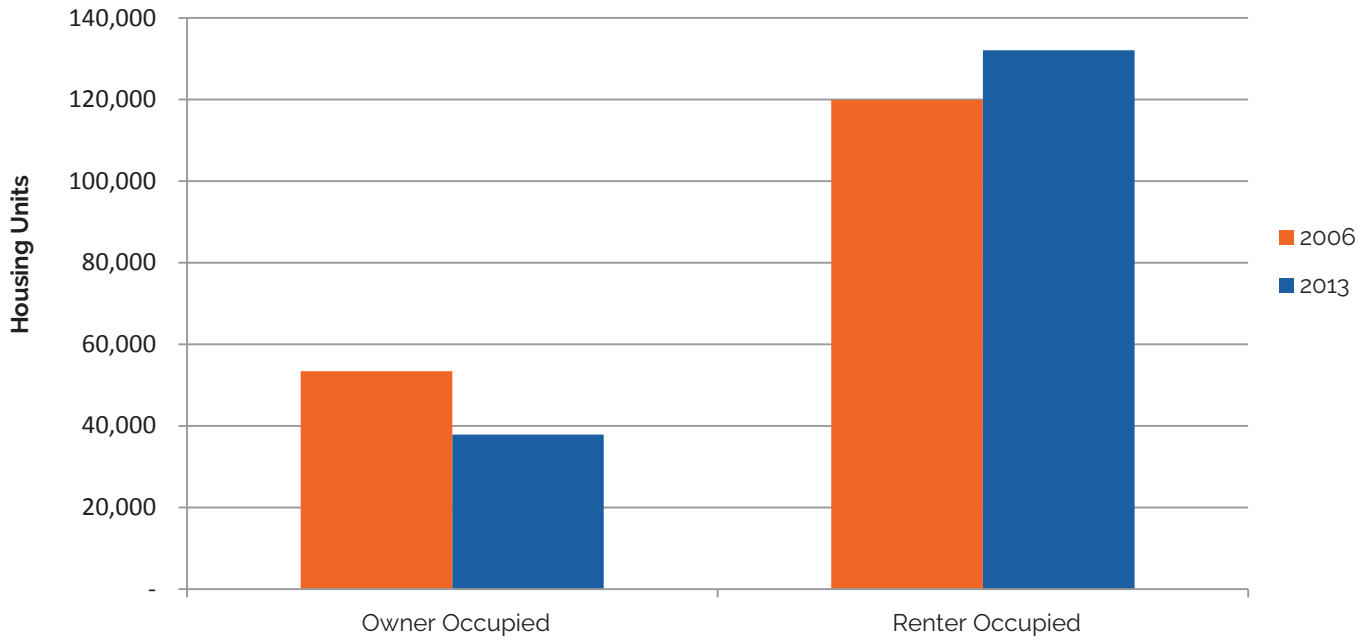
What Young People Make vs. What They Owe

Percent change from 2005 in median annual earnings of people 25-34 years old holding just a bachelor's degree and average student loan balance for people under 30 years old.



Source: Wall Street Journal

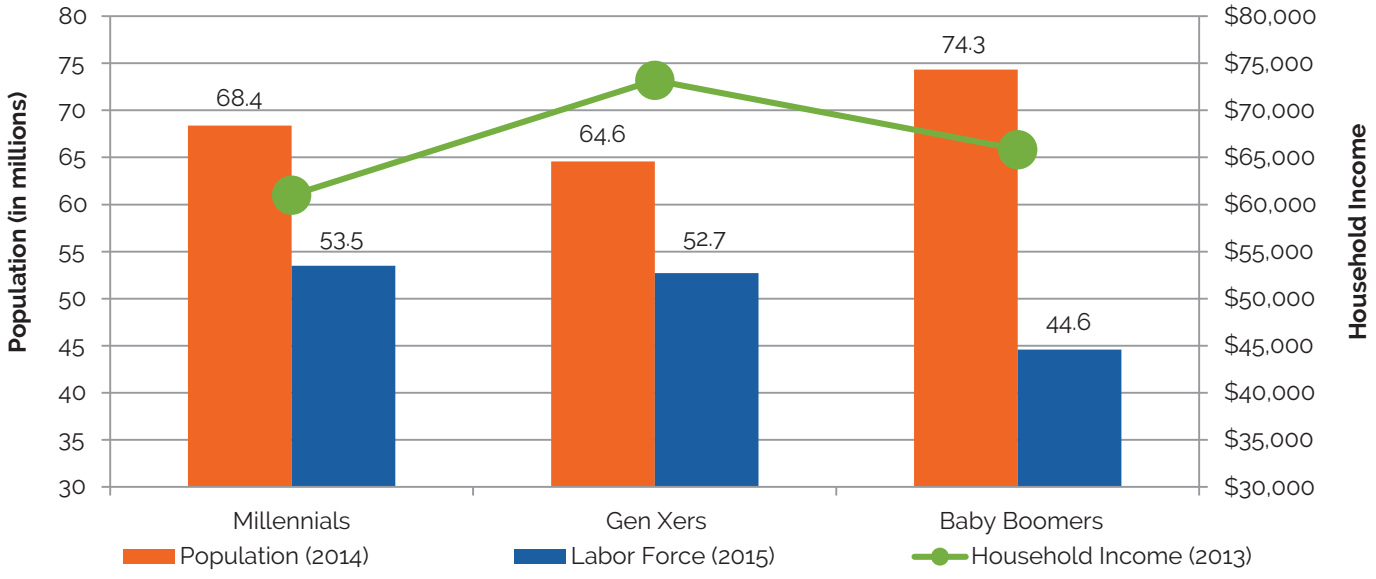
Owner-Occupied and Renter-Occupied Housing Units for Orange County Millennials



Source: American Community Survey

Nationally, student loan debt increased from $260 billion in 2004 to over $1.2 trillion in 2014 with the average debt per person increasing from $18,650 to $33,000 during the same time period. A study released in 2014 by TransUnion indicated that student loans make up 36.8 percent of total debt for consumers aged 20 to 29. This debt, in addition to the general economic downturn, has delayed Millennials' purchases of cars and homes; home ownership rates for individuals aged 25 to 34 dropped 8 percentage points in the last decade. The majority of Millennials are simply unable to afford their own home and have thus migrated to downtown areas with relatively lower apartment rents and access to high-wage occupations, public transportation, retail, and local nightlife.

Population and Household Income Generational Disparaties



Source: PEW Research Center, Social and Demographic Trends

Youth Employment, Skills Gap and Workforce Opportunities

The skills gap, also known as the workforce gap, represents the inability for employers to find qualified individuals to fill their vacant positions, a serious problem for the present and future of many industries. Even with Millennial and youth educational attainment on the rise, Orange County still faces a serious, widening skills gap issue, especially as the region's unemployment rate is projected to continue to decline. Many partnerships between employers, educational institutions, and local governments began providing young people with the skills they need to fill vacant, high-wage positions and provide opportunities for upward mobility.

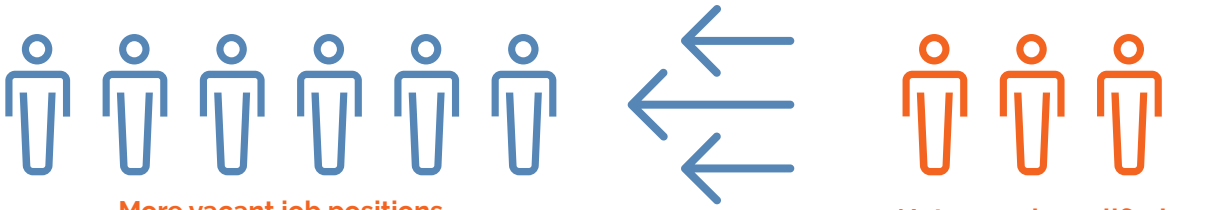
> *Even with Millennial and youth educational attainment on the rise, Orange County still faces a serious, widening skills gap issue.*

In an attempt to identify the workforce and skills gap in major U.S. markets, JP Morgan Chase has recently launched their New Skills at Work program, a $250 million program that partners with various local economic development organizations to quantify the skills gap, especially for Middle-Skill occupations, and provide pathways forward and recommendations on how to close these gaps. Middle-Skill employment opportunities - jobs that require more than a high school diploma but less than a bachelor's degree - continue to expand in Orange County. Middle-Skill workers command higher wages and enjoy greater potential for upward economic mobility than their less-skilled peers. These enhanced training and educational programs will help both young job seekers and employers who have struggled to fill these lucrative positions.

Orange County's 2013 unemployment rate was 29.3 percent for residents aged 16 to 19 and 11.5 percent for residents aged 20 to 24, both significantly higher than the county-wide average of 6.5 percent. This decline in employment, despite the availability of open positions, highlights the gap between the skills potential employees have and the skills that employers require.

Currently, Orange County has an estimated 483,970 middle-skill jobs, 31.8 percent of total county employment. These middle-skills jobs are expected to grow by approximately 15 percent, or by 17,678 jobs annually (7,894 new jobs created and 9,757 replacement jobs per year) over the next decade.

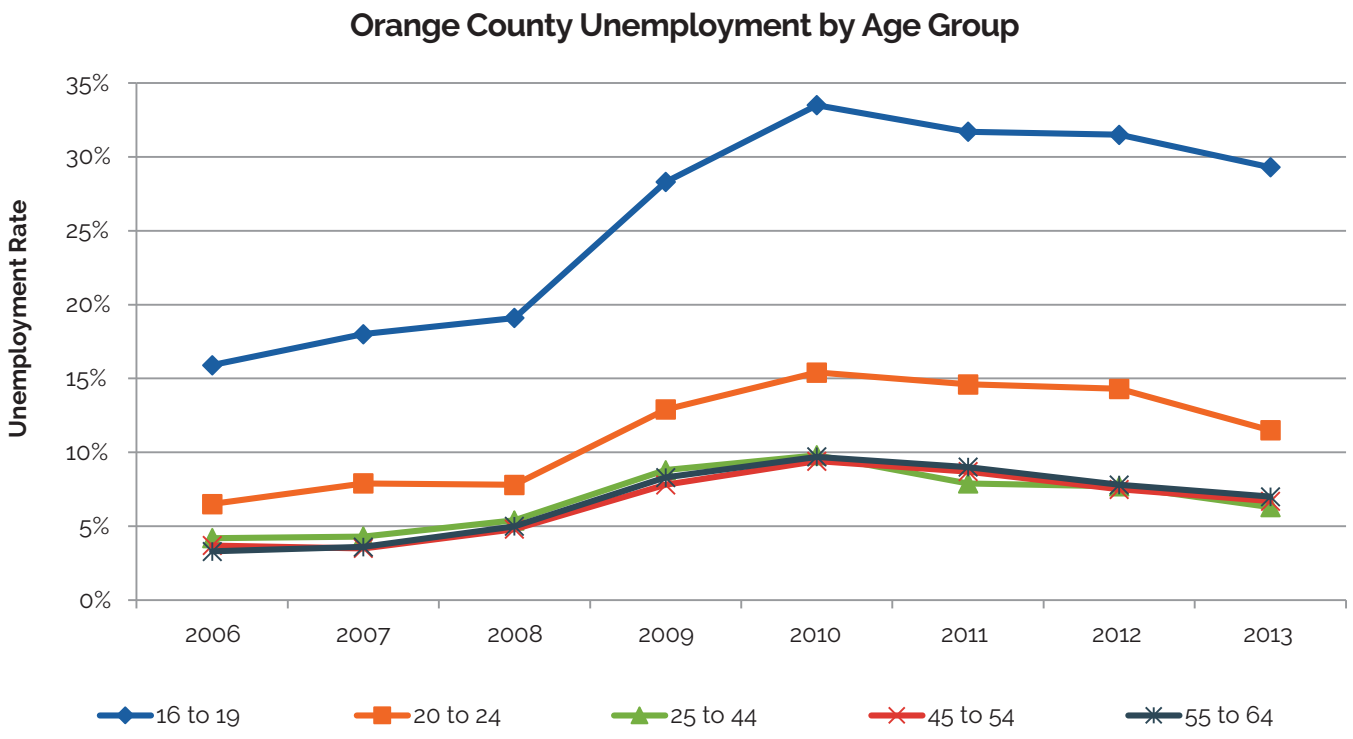
Skills Gap Explained:



These middle-skill jobs provide annual average wages of $53,110 compared to the average of $31,371 for lower skill positions, which reinforces the benefit of providing education and training programs aimed at filling these jobs. Additionally, 54 percent of middle-skill positions pay wages above Orange County's hourly living wage of $24.81 compared to 40 percent of all occupations in Orange County. As the housing market rebounds and average rents rise, middle-skill employment will help residents afford the county's high cost of living.

At the national level, demand for workers in manufacturing, health care, construction and energy-related occupations outstripped supply of adequately skilled workers to fill these positions. According to labor market data, the three major industry clusters which demonstrated the need for qualified, well-educated individuals were information technology, advanced manufacturing and health care. These industries had the highest number of job openings, demonstrating high growth rates and a significant percentage of open positions of all job openings. An analysis of these industries and their occupations can be seen in the Sector Spotlight portion of this report, which can be found on page 54.

At the national level, demand for workers in manufacturing, health care, construction and energy-related occupations outstripped supply of adequately skilled workers to fill these positions.



Source: American Community Survey

Section 3: Crosscutting Industry Highlights

Programs and policies should support emerging industries that accelerate growth 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 increase the diversity, adaptability, and resilience of Orange County's workforce. These growing cross-cutting industry cluster drivers have the potential to both support existing sectors and provide a path forward for the county and its residents.

Why Is This an Issue?

Orange County's knowledge-based economy depends on highly-skilled homegrown talent with transferable skills that are applicable across traditional industry cluster boundaries. As the county recovers from the Great Recession, four emerging industry groups that blur traditional cluster boundaries – International Trade, Information Technology, Creativity, and Green Technology – drive job creation in major industry clusters. This report will help educational and workforce development institutions tailor policies to support these emerging opportunities for growth.

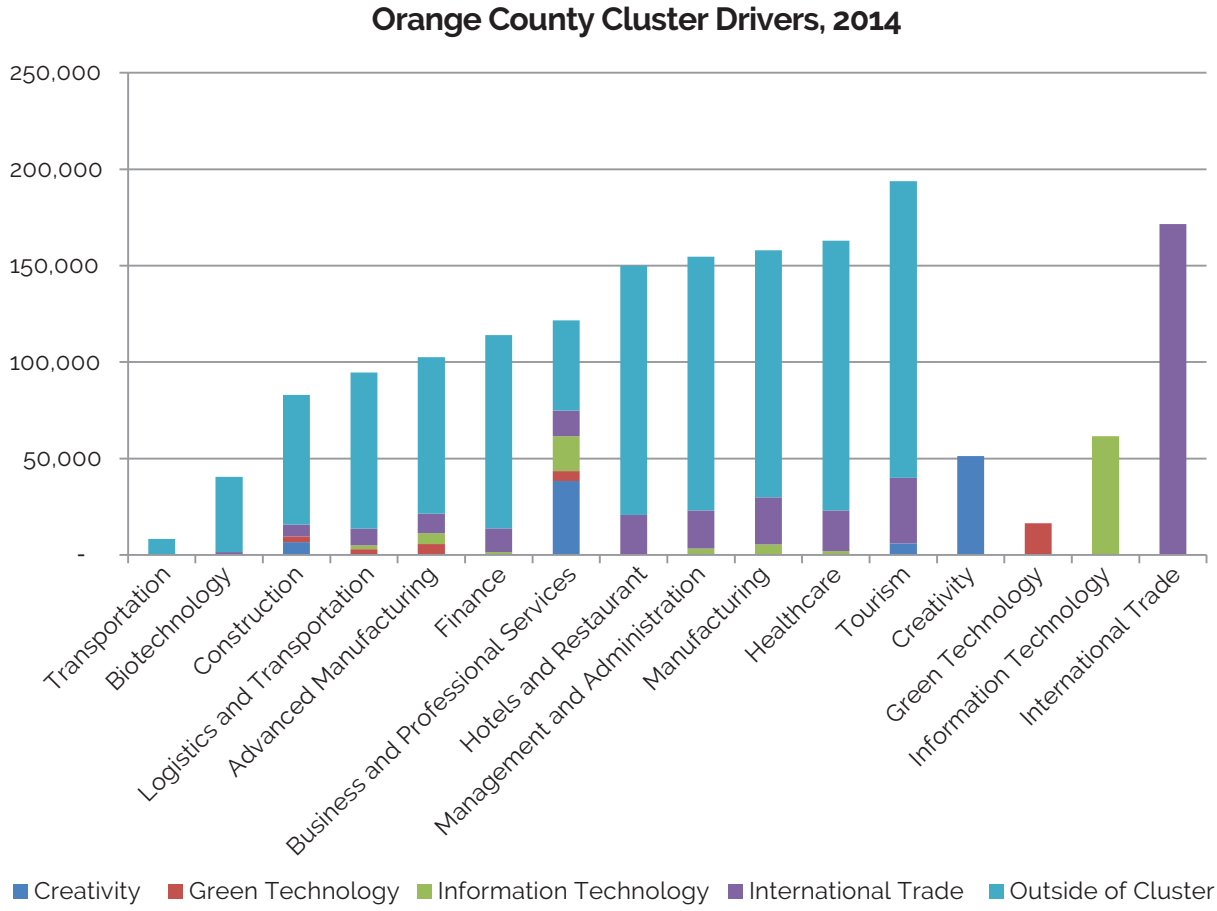
This section explores these interrelated components of cross-cutting industry formation and how each driver overlaps and enhances its constituent cluster industries; each cluster has a major horizontal impact as a core component of other industries. Information Technology, for instance, works with any corporation that relies on computer networks and software for daily operation and is thus applicable to nearly any type of company. Similarly, Creativity-oriented occupations are essential to any firm requiring design or communications specialists. 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 industry drivers are increasingly important to Orange County's economy because they create jobs and economic growth in a wide variety of industries.

How Do We Know This Issue Exists In Orange County?

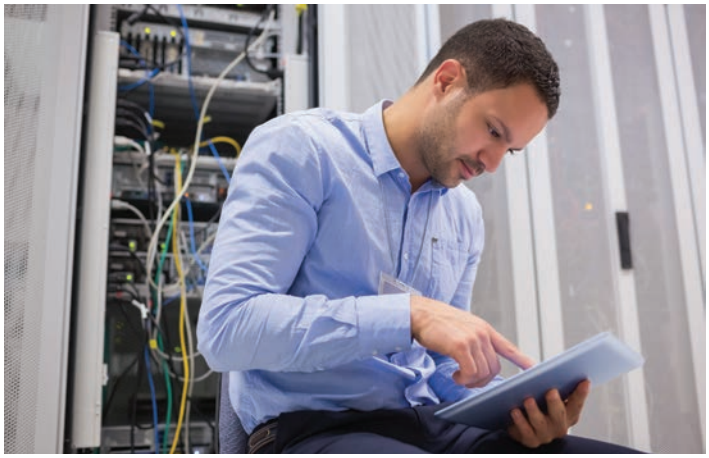
Although the recession hampered growth in many sectors, industries within these cross-cutting cluster groups are expected to both support traditional sectors and become major individual sources of employment and income generation. In total, the four cross-cutting clusters accounted for approximately 280,000 jobs across 12 different industry clusters in 2014. While International Trade enjoyed ample year-over-year gains in employment, Information Technology and Creativity saw only modest gains compared to last year's report.

- **International Trade**: 171,540
- **Information Technology**: 61,620
- **Creativity**: 51,300
- **Green Technology**: 16,500

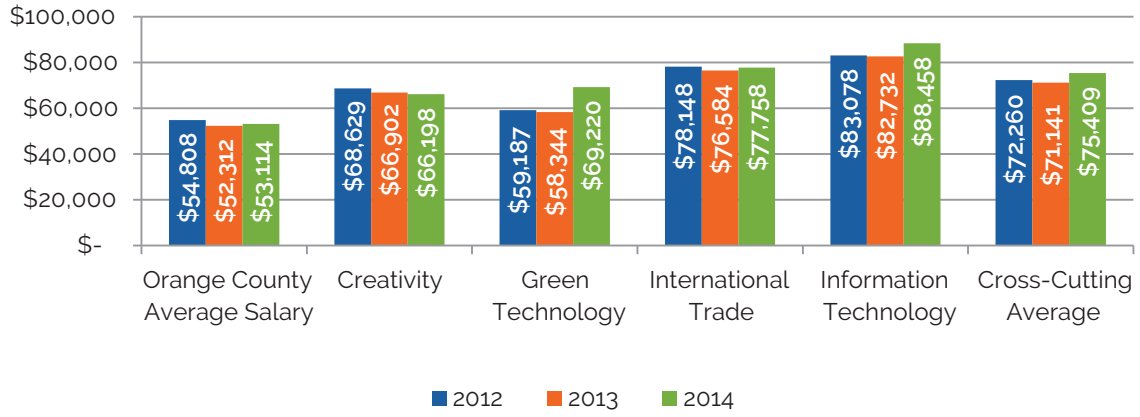


Source: OCBC Analysis of California Employment Development Department Data, OTIS Report, Next10, and Los Angeles Economic Development Corporation

High compensation levels provide evidence of the high demand for workers in these clusters; salaries in cross-cutting clusters average roughly $22,000 above the overall average Orange County wage. Information Technology and International Trade lead cross-cutting clusters in this category with average annual wages of $88,458 and $77,758, respectively.



Average Salaries in Orange County's Selected Industry Drivers, 2014



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

International Trade

Orange County must continue to support International Trade, one of its key economic growth and job creation drivers. The county's accessibility to major ports, robust manufacturing base, and well-connected and thriving business community should encourage expansion of its international trade market, particularly with its top five trading partners.

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 large and growing multicultural presence. Along with Orange County's existing manufacturing base (computer software, electronics and transportation equipment), these factors create opportunities for international trade, which directly and indirectly accounts for over 202,000 jobs in Orange County. Additionally, sectors tied to International Trade are growing much faster than other sectors, which illustrates their importance as drivers of the Orange County economy. The county continues to build a foundation for further growth by cultivating trade relationships with growing economies like China, Japan, South Korea, Mexico, and Canada.

California State University, Fullerton's Institute for Economic and Environmental Studies' most recent edition of "2014 International Trade Forecast: An Overview of Orange County and Southern California Exports" states that the county ranks twelfth in the nation for total merchandise export volume with exports totaling $24 billion in 2012, the latest year for which data on actual exports is available. This places Orange County just behind the Minneapolis-St. Paul Metropolitan Statistical Area (MSA) and just ahead of the San Francisco-Oakland MSA. Roughly 13 percent of Orange County's gross metropolitan product is generated from exports, up slightly from 12.3 percent in 2011 and behind only the San Jose-Sunnyvale-Santa Clara MSA, where exports accounted for 15.3 percent of the gross metropolitan product. From 2003 to 2007, the total volume of exports grew an average of 13 percent; export values reaching $17.9 billion in 2008, almost twice as much as a decade earlier. Although exports declined dramatically during the Great Recession — a 14.9 decrease from $17.9 billion in 2008 to 15.3 billion in 2009 — the county has experienced a noteworthy recovery, with rapid export growth of 22 percent in 2010 and 2011. Overall, from the recession low in 2009 through 2012, cumulative growth in exports was a robust 57 percent. The Institute for Economic and Environmental Studies (IEES) estimates growth from 2012 to 2015 at 6 percent per year, reaching just over $28 billion in value by 2015.

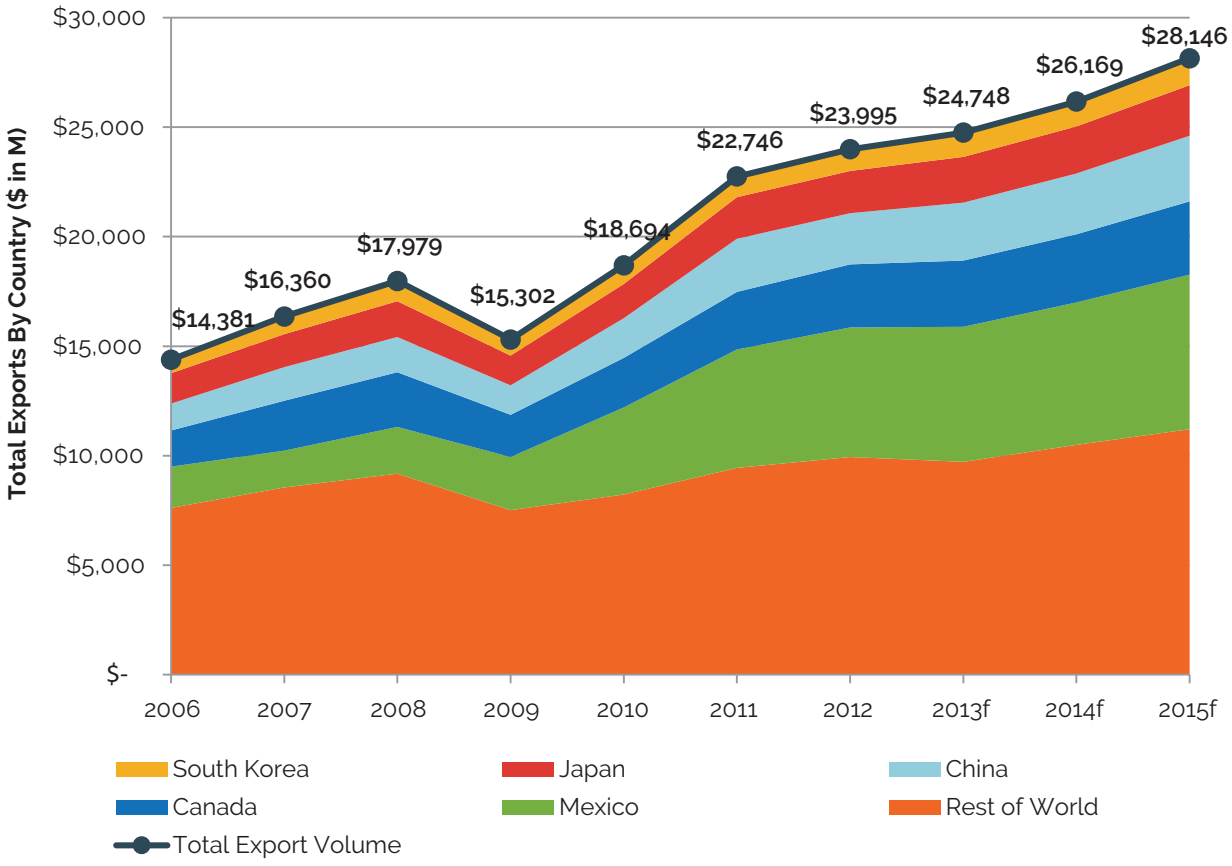
Orange County's top countries for exports in 2012 were Mexico and Canada, accounting for $5.9 billion and $2.8 billion in trade, respectively. By the end of 2015, it is estimated that exports to Mexico and Canada will reach $7-.1 billion and $3.3 billion, respectively — representing 37 percent of total export volume. China, Japan, and South Korea round out the top five trade partners for the county with exports totaling $2.3 billion, $1.9 billion and $1.0 billion in 2012, respectively. Together, these three countries account for 21.9 percent of merchandise exports. Export growth is based on these countries' economic expansion. China's economy expanded by 9.2 percent in the last year data was available, while South Korea's increased by 3.5 percent and Canada's by 2.5 percent.

Cal State Fullerton estimates that exports to China will increase to reach $3 billion by 2015 representing nearly 11 percent of total export volume while exports to Japan and South Korea will reach $2.3 billion and $1.2 billion for the same time period. Overall, from 2012 to 2015 exports to China are expected to grow by 28.3 percent, to South Korea by 23.5 percent, to Japan by 19.3 percent, to Mexico by 19.2 percent and finally, exports to Canada by 16.6 percent.

Orange County's high-tech trade clusters, specifically Transportation Equipment and Computer/Electronic Products, which together accounted for $11.6 billion representing nearly 50 percent of total exports in 2012, continue to be the most dominant export sectors. The high global demand for high tech products provides a major opportunity for the Orange County economy as exports of Computer and Electronic products and Transportation equipment are expected to reach $8.5 billion and $5 billion, respectively, in 2015. Other significant export trade sectors for Orange County include Chemicals, Machinery, and Miscellaneous Goods, which together comprising $4.5 billion.

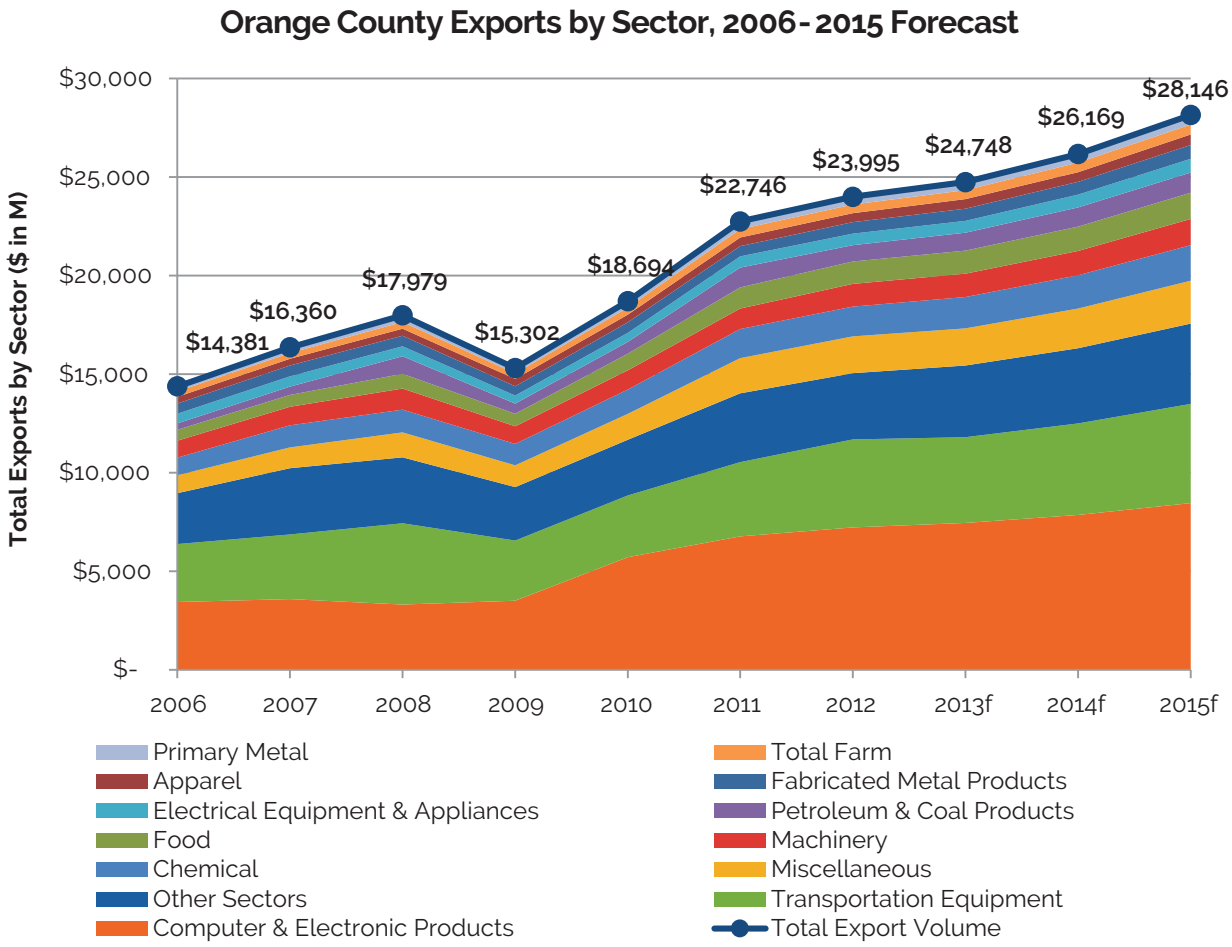
> ***Orange County's high-tech trade clusters, specifically Transportation Equipment and Computer/Electronic Products, which together accounted for $11.6 billion representing nearly 50 percent of total exports in 2012, continue to be the most dominant export sectors.***

Orange County Exports by Country, 2006 - 2015 Forecast

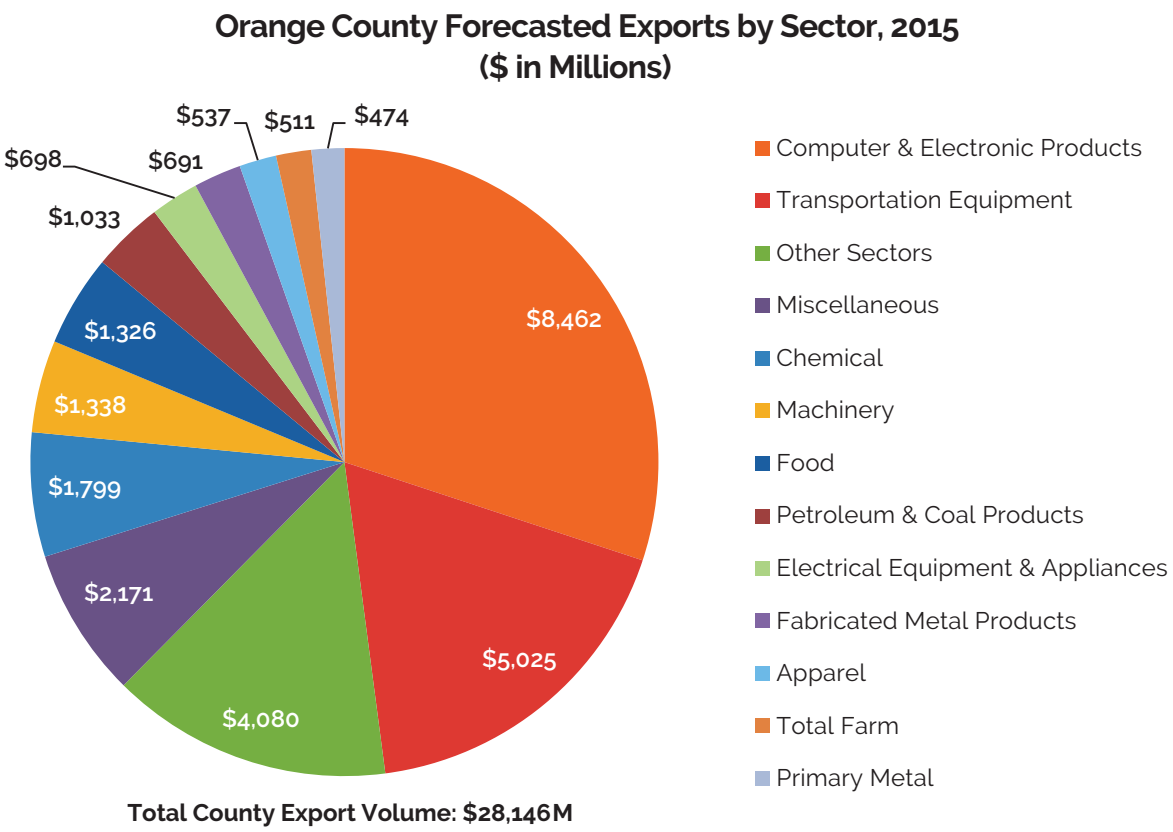


Source: IEES, California State University, Fullerton

Overall, total export volume is expected to reach $26 billion in 2014 $28 billion in 2015. The demand for high-tech goods, along with new trade agreements with South Korea, Panama, and Columbia, will fuel this growth. The continued strength of the U.S. dollar, however, could have negative effects on export growth, especially if the U.S. Federal Reserve carries out its expected September 2015 interest rate hike. Fortunately, the potential negative impacts will be mostly mitigated by spacing between hikes and increased communication with the business community.



Source: IEES, California State University, Fullerton



Source: IEES, California State University, Fullerton

Information Technology

A highly skilled Information Technology (IT) workforce is a key economic growth driver for the region, especially important as Orange County continues to transition to a knowledge-based, high-tech 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 depend on a single 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.

Orange County has long been a key player in electronic software, technical services, and hardware manufacturing, all industries that rely heavily on IT occupations. The county's IT workforce promotes employment growth outside of the technology industry through its ability to connect business and make their day-to-day operations more efficient. The Professional and Business Services industry, for example, relies on third-party IT developers for services ranging from software to data storage to cloud computing. These and many other new technologies allow businesses to operate and respond to their customers' needs more efficiently and make informed decisions with data analytics.

The average IT salary is $88,458, about $35,000 more than county's annual average. According to California's Employment Development Department, the state's top-earning occupations in Information Technology include Information Systems Managers ($146,164 annual salary), Information Research Scientists ($118,158 annual salary), and Computer Hardware Engineers ($110,135 annual salary). The integration of business and technical skills in the 21st century Orange County economy means that occupations that bridge business and IT are rapidly becoming major drivers of economic growth in the county.

California's Employment Development Department recently reported that two of the top ten occupations with the fastest job growth in Orange County were in the IT sector. Orange County must continue to supply its IT industry with qualified workers, a topic explored in the Workforce Skills Gap section of this report.

Orange County's Fastest Growing Occupations Between 2012-2022			
Occupation	Overall Percent Growth	Annual Percent Growth	Current Annual Salary
Fashion Designers	54.3%	5.4%	$60,966
Personal Care Aides	49.6%	5.0%	$21,755
Brickmasons and Blockmasons	49.0%	4.9%	$49,069
Occupational Therapy Assistants	48.1%	4.8%	$72,642
Loan Interviewers and Clerks	45.7%	4.6%	$45,971
Floor Layers, Except Carpet, Wood and Hard Tiles	45.5%	4.5%	$32,372
Telecommunications Equipment Installers and Repairers	44.2%	4.4%	$65,566
Information Security Analysts	43.5%	4.3%	$93,088
Painters, Construction and Maintenance	43.1%	4.3%	$37,280
Loan Officers	42.6%	4.3%	$72,150

Creativity

Orange County's increasing focus on STEM as a critical competitive advantage has evolved into an emphasis on STEAM, which adds "Arts" to 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, and employ creative professionals to creative innovative products or unique experiences.

Creative professions intersect with traditional industries on many levels; two-thirds of the Creativity cluster's employment is derived from the Business and Professional Services cluster, signifying a multi-industry reach. According to the "2014 Otis Report on the Creative Economy" prepared by the Los Angeles Economic Development Corporation (LAEDC), creative industries in Orange County employed approximately 51,300 workers directly in 2013 (about 3.5% of total county jobs) and a total of 82,700 jobs if multiplier impacts are included, accounting for 1 in 18 jobs in the county. The largest sectors of the creative industry in Orange County were Publishing and Printing which employed 12,400 workers, followed by the Fashion sector which employed 11,000 workers in 2013. Together, direct, indirect, and induced creative industry employees number 82,700 in Orange County.

While employment in creative industries has been steadily increasing in Los Angeles County over the past few years, Orange County has experienced a decline in overall creative industry employment. After posting a strong 2.5 percent increase in creative employment in 2012, employment fell by an estimated 0.9 period in 2013 in Orange County despite overall employment growth of 2.5 percent for the same time period. Creative employment in Orange County has experienced a 16.9 percent drop, representing 10,400 jobs, since the onset of the Great Recession. Sectors which were hardest hit by this decline were furniture and decorative arts which declined by 4,300 jobs or 39.4 percent, publishing and printing which lost 2,700 jobs or declined by 17.7 percent and fashion which declined by 1,700 jobs or 13.1 percent. One small ray of light was the Internet publishing sector, a subsector of publishing and printing which increased by 600 jobs, a 49.7 percent increase.

> ***Orange County has experienced a decline in overall Creative industry employment.***

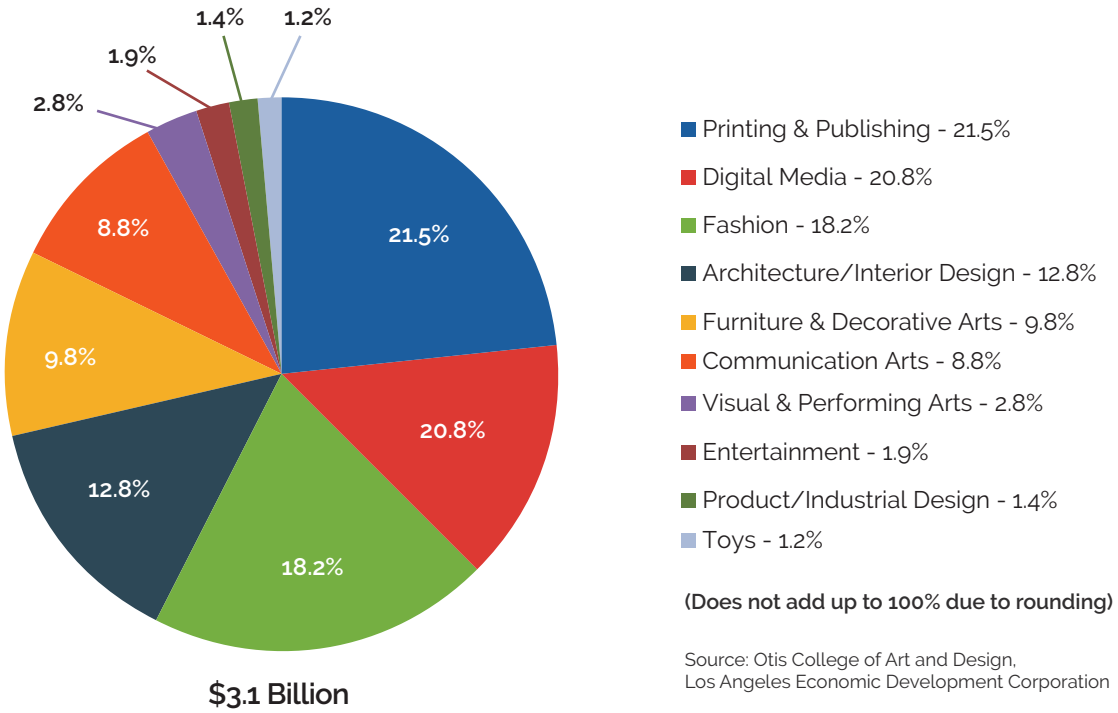
Creative industries in both Los Angeles County and Orange County are made-up of a large number of self-employed individuals who work for themselves as well as for larger organizations on contract. As with payroll employment, the number of self-employed individuals in the creative industries dropped during the Great Recession. The number of self-employed creative professionals, however, rebounded much more quickly than their traditionally-employed counterparts; there are now many more small businesses in the creative industries than there were pre-recession. Orange County had a total of 23,973 self-employed creative professionals in 2012, a 9 percent increase from 2007's total.

Orange County Creative Jobs

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

The losses seen above resulted from the lingering impact of the Great Recession, which hit Orange County early and hard, on creative employment. Despite an increase in the number of creative self-employed and small firms in the County, non-employer total revenues fell by 4.8 percent to $937.4 million in 2012. Some relevant sectors – architecture, interior design, furniture and decorative arts – have yet to recover from losses experienced during the Great Recession. Many of the jobs lost during this period were never recovered, leading to many individuals quitting their job search to create their own firms and work as independent contractors. Additionally, the economic downturn caused many businesses to replace full-time jobs with part-time, outsourced, and contract work.

Orange County Creative Labor Income



$3.1 Billion

(Does not add up to 100% due to rounding)

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

Labor income from creative industries in Orange County totaled $3.1 billion in 2013, with 21.5 percent ($669 million) originating from Printing and Publishing, 20.8 percent ($647 million) from Digital Media, and 18.2 percent ($564 million) from Fashion. This correlates with Los Angeles County, which had $30.4 billion in labor income of which 45 percent ($13.7 billion) coming from the Entertainment sector, 17.7 percent ($5.4 billion) from the Visual and Performing Arts sector, and 12 percent ($3.6 billion) from the Fashion sector in the same year. In terms of individual wages, the average 2014 wage for the Creative industry in Orange County was $66,198, approximately 12 percent below Los Angeles County's average wage of $74,795.

Creative occupations provide many good-paying job opportunities and career pathways, especially in the growing fields of computer software, digital media, computer gaming, entertainment, and design. Primarily because of the proliferation of well-paying employment opportunities, creative industries and related industry clusters also provide significant tax revenue for Orange County; combined revenue from these industries totaled $631.7 million in 2013.

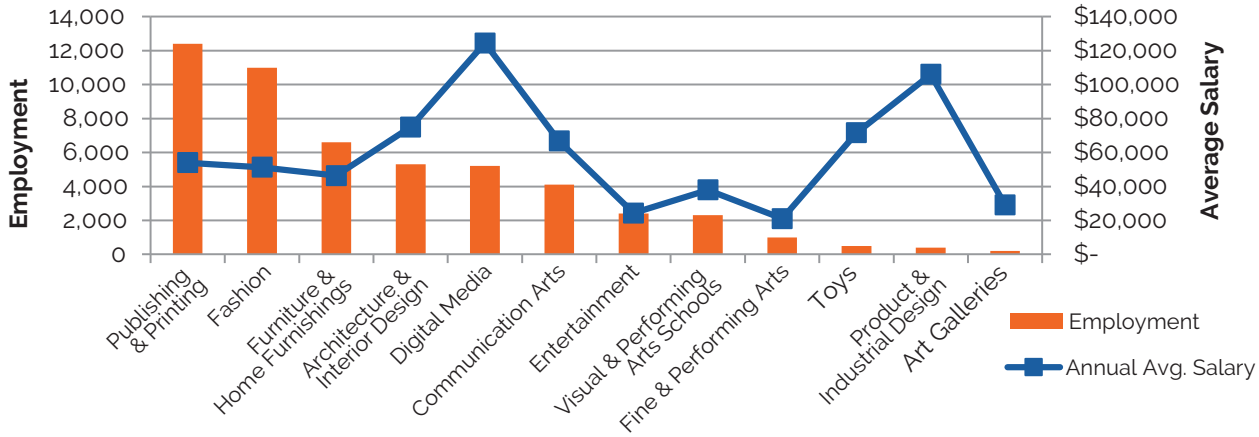
Despite recent decline and slower growth, the LAEDC has projected that Orange County creative employment will expand by 3.4 percent – 1,700 jobs – by 2018. The recovering housing market is expected to help the architecture and interior design sector grow by 700 jobs, while the communication arts, digital media and publishing and printing sectors are estimated to add 500 jobs each; entertainment will see a smaller increase of 250 jobs. However, the LAEDC estimates that the fashion sector will lose 1,000 jobs by 2018, a loss of 8.8 percent.

Creative Sector Orange County Salaries

Notes: Salary data for art, drama and music teachers not available for Orange County.
Source: Bureau of Labor Statistics, Occupational Employment Statistics

> ***Despite recent decline and slower growth, the LAEDC has projected that Orange County creative employment will expand by 3.4 percent – 1,700 jobs – by 2018.***

Orange County Creative Industry Employment and Average Salaries, 2013



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

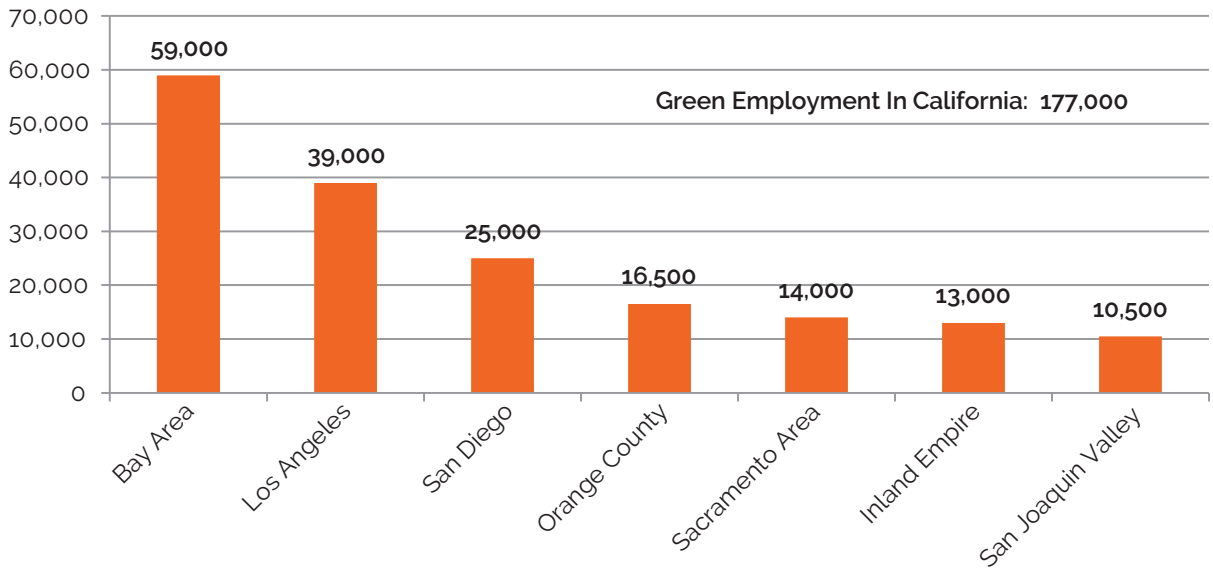
Green Technology

Many Orange County companies have found that Green Technology practices make good business sense in addition to complying with state and federal legislation. According to Next 10's latest edition of the "California Green Innovation Index" report, Orange County had the fourth highest number of green jobs in the state, with 16,500 jobs as of January 2014; the Bay Area had 59,000 clean economy jobs, followed by Los Angeles with 39,000 and San Diego with 25,000. The Business and Professional Services, Advanced Manufacturing, and Construction clusters saw the highest green employment totals in 2012.

Next 10 categorizes Green Technology employment across 15 clean economy segments, ranging from infrastructure to agricultural support, and has found significant differences in each segment's growth since the beginning of the decade. While the largest segment of green technology employment in Orange County was Air & Environment with 4,800 jobs, the greatest employment growth has stemmed from Clean Transportation, which has benefited from Orange County's commitment to alternative fuel vehicle infrastructure. Plug-in hybrid vehicles experienced 13 times more registrations in 2012 than in 2011; zero-emission vehicle registrations increased by 93 percent to total 3,800 in 2012 and by another 93 percent from 2012 to 2013 to total 7,400 registrations. Green Technology-related Business Services make up a major part of this cluster's overall employment and also demonstrate faster than average growth rates.

Additionally, Orange County is an important partner of the California's proposed Hydrogen Highway which hopes to link Southern and Northern California together for fuel cell vehicles that run on hydrogen fuel. Orange County currently has three operational hydrogen fuel stations and plans to open an additional nine stations in the next few years. In total, there are nearly 50 stations currently in development in California which will support increased production of hydrogen fuel cell vehicles as they come online. The only hydrogen fuel cell vehicles currently on the market are the Toyota Mirai, Hyundai Tucson, and Mercedes Benz F-Cell. While these vehicles are slightly more expensive than traditional vehicles, the state of California offers car buyers $5,000 rebates as part of the Clean Vehicle Rebate Program. Many hydrogen vehicle dealers have joined the California Fuel Cell Partnership to recommend locations for new fuel cell stations that will provide efficient service for their customers.

California Green Economy Employment, January 2014



Source: Next 10 California Green Innovation Index

Regional Industry Clusters of Opportunity (RICO) Initiative

The California Workforce Investment Board, working in coordination with the California Labor and Workforce Development Agency, the California Energy Commission, and the Governor's Office of Business and Economic Development (GO-Biz) partner to lead the AB 118 Regional Industry Clusters of Opportunity (RICO) initiative, which designs and implements regional economic development strategies in the alternative fuel and advanced vehicle technology industries. The first stage of the RICO program is the diagnosis of these clusters of opportunity, followed by setting priority opportunities for the advanced transportation cluster growth. After priorities have been set, the Industry Sector Partnerships will identify and connect specific investments and commitments of local, state, and federal government partners as well as private companies and others to advance the competitive position of those regionally targeted clusters of opportunity. Lastly, the Industry Sector Partnership will develop plans to support the long-term sustainability and growth of these advanced transportation clusters.

Section 4: Education and Workforce Training Trends

A highly skilled and educated workforce will nurture emerging industry sectors and attract high-wage occupations. Analyzing key indicators such as college eligibility rates, SAT Exam performance, the percentage of English Language Learners, as well as dropout rates is imperative to crafting the policy solutions that will advance Orange County's workforce and, in turn, attract and sustain the diverse industry clusters of the region.

COLLEGE ELIGIBILITY

Orange County must increase the effectiveness of community college and university level education in order to maintain one of its key competitive advantages — a highly skilled, educated workforce.

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 depends on the educational attainment of its workforce. The availability of a diverse, well-educated pool of individuals in the labor market provides a competitive advantage in specialized industries and supports broad economic development across the county.

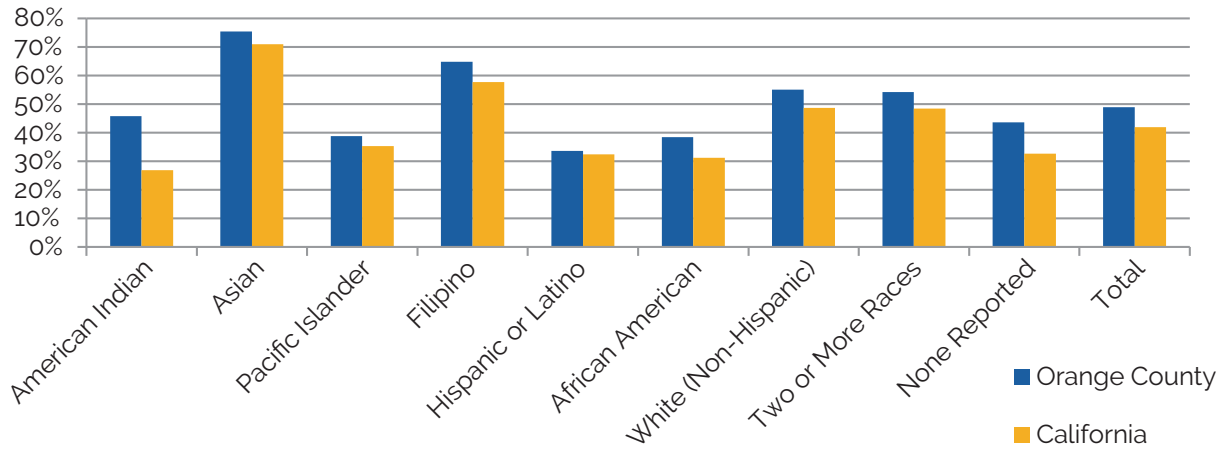
Policy should focus on increasing college and university-level educational attainment, especially in STEM-related fields, as well as supporting adult retraining with a focus on aligning skills with labor needs in growing industry clusters. This will provide industries with a localized competitive advantage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

How Do We Know This Issue Exists In Orange County?

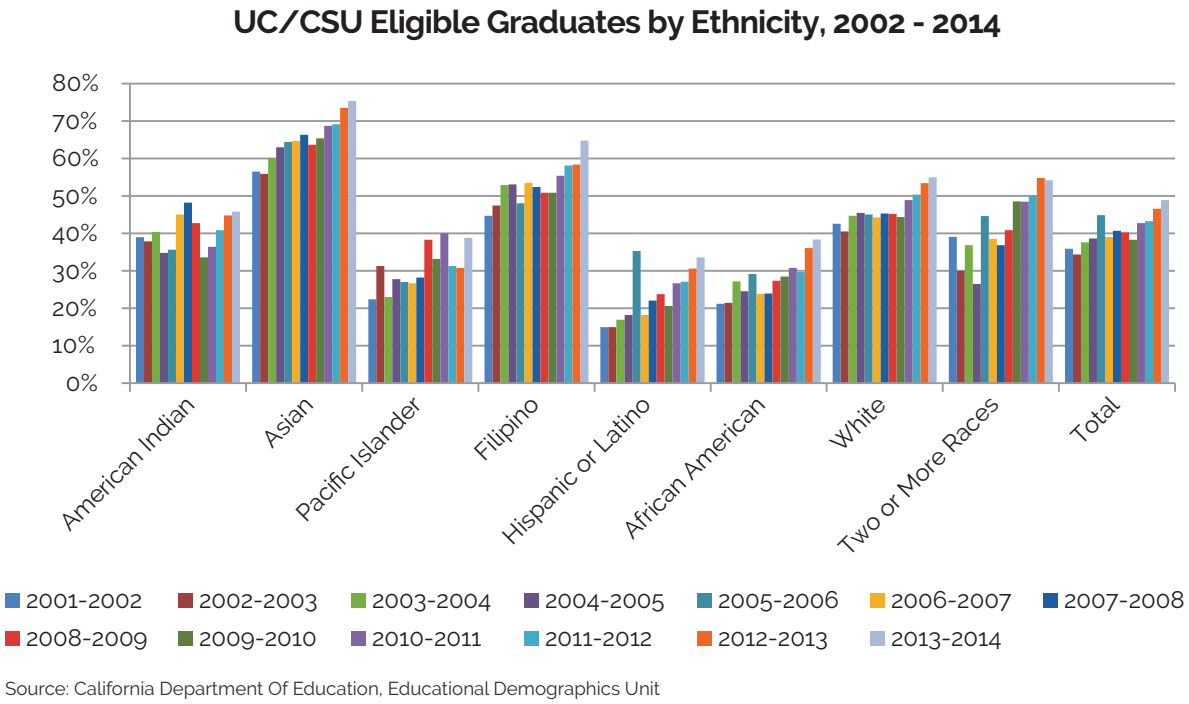
Careful analysis of recent emerging labor market trends indicates a significant increase in educational attainment required for many occupations and industries, even for entry-level positions. This is especially true in key sectors of the Orange County economy such as information technology and healthcare. Of high school graduating seniors in 2014, 48.9 percent were eligible for entry into the UC/CSU university systems. While this is a significant 10.6 percent improvement compared to 2010, it is only a 2.3 percent improvement over the previous year. These numbers indicate that there is room for growth, particularly within certain subpopulations.

All ethnic groups saw an increase in UC/CSU eligibility rates since the 2013 school year, except for those of two races or more who experienced a slight 0.6 percent decrease. Asian students continue to achieve the highest levels of eligibility with a 10-year high of 75.4 percent eligibility. In addition, African American eligibility has noticeably improved in Orange County, growing from 29.7 percent in 2012 to 38.4 percent in 2014. Latino student college eligibility rates in Orange County continued to improve significantly in the last five years. Specifically, the portion of Latino students who graduated with UC/CSU eligibility was 33.6 percent in 2014 compared to 30.6 percent in 2013 and 27.1 percent in 2012. County-wide efforts to address these low rates, such as Latino Educational Attainment Initiative, have paid significant dividends and had a beneficial impact on Latino UC/CSU eligibility, which has increased thirteen percent since 2010.

UC/CSU Eligible Graduates in Orange County and California, 2013 - 2014



Source: California Department Of Education, Educational Demographics Unit



Source: California Department Of Education, Educational Demographics Unit

SAT EXAM PERFORMANCE

Orange County must address educational achievement gaps in its school districts to ensure that all students receive a quality education. The county can maintain its competitive advantage by assisting both underperforming districts with college preparation and supporting high-performing districts with expanded opportunities for enriching the education pipeline.

Why Is This an Issue?

While not all schools have improved, county-wide academic performance has improved steadily over the past decade. The SAT, a standardized test widely used for college admissions, measures student performance and help decision-makers assess possible shortfalls in the educational system and identify school districts that require additional attention. Test results also provide employers with broader indicators of workforce readiness. Strong performance on academic tests encourages Orange County employers to create local job opportunities.

How Do We Know This Issue Exists In Orange County?

Orange County's SAT performance compares well to peer regions and state and national averages. Despite recent efforts, however, as outlined below, significant gaps still exist between high- and low-performing school districts. Based upon analysis contained throughout this report, 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 will improve the Orange County school system's ability to prepare students for the future.

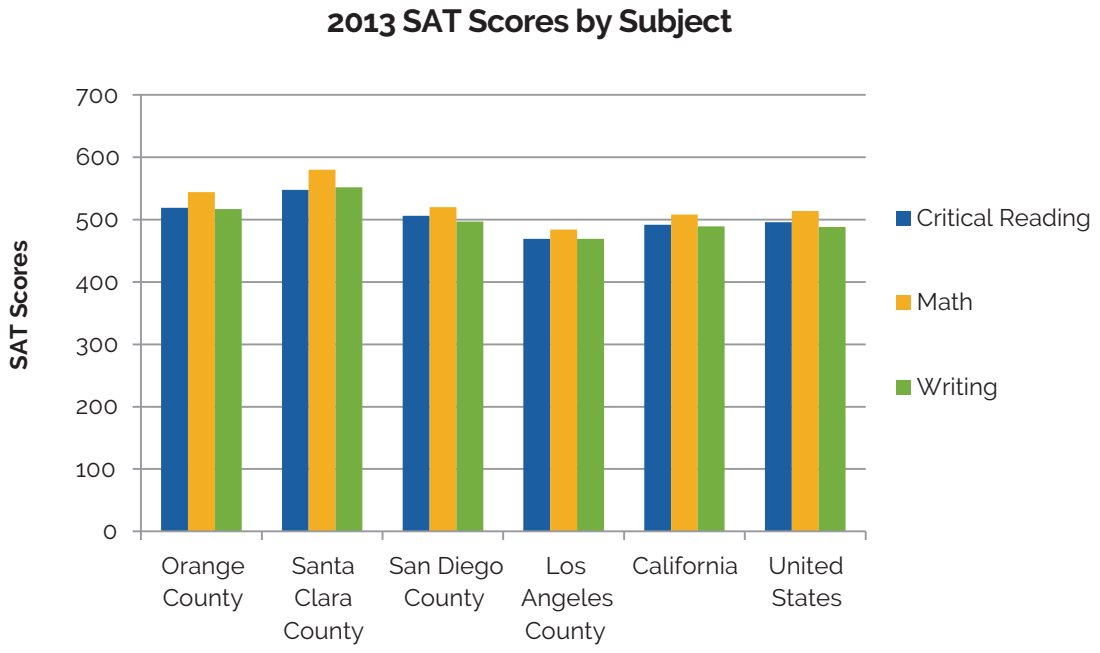
Programs and policies should aim to enhance educational performance in underperforming districts and prepare graduating students to pursue advanced degrees. Doing so will improve Orange County's future workforce and thus its ability to attract highly-skilled workers and high-growth, high-wage businesses.

> *Orange County must continue to implement programs and policies that focus on improving educational attainment, particularly among English language learners and economically disadvantaged populations.*

SAT Performance

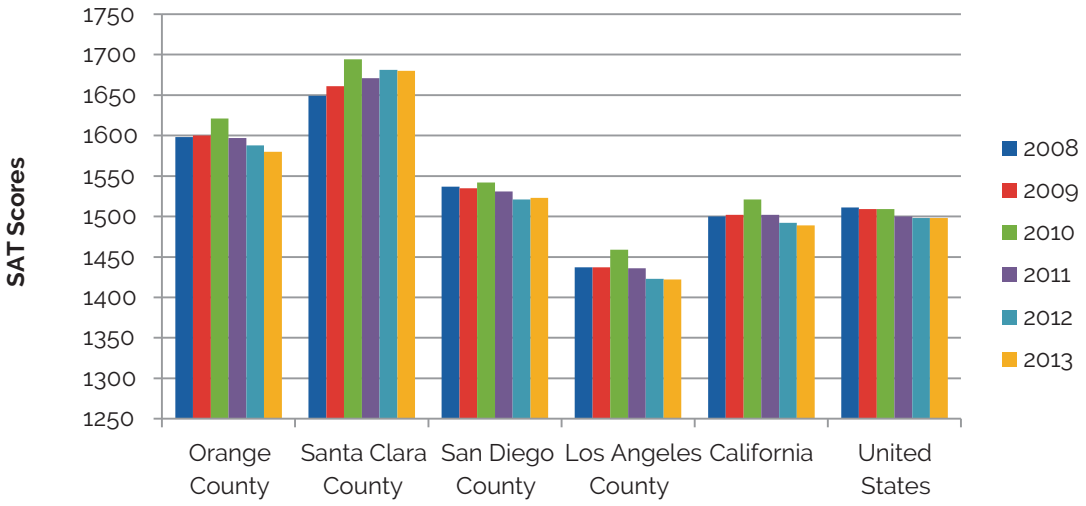
SAT performance remained steady across California over the past year, with most regions averaging a one-point drop in cumulative scores since 2012. Orange County declined from an overall average of 1,588 in 2012 to 1,580 in 2013. Despite declining scores, the county remains well above state and national averages. Santa Clara County, which has an average SAT score of 1,680, is the only county to have outperformed Orange County pupils on average.

With the exception of San Diego County, all peer regions experienced a decline in SAT averages over the past year, even Santa Clara County which historically has had continual improvements in its SAT scores. With SAT scores trending downward in the majority of the U.S. and regions, Orange County will need to buck the trend and join San Diego County in growing SAT scores in order to help students prepare for future success.



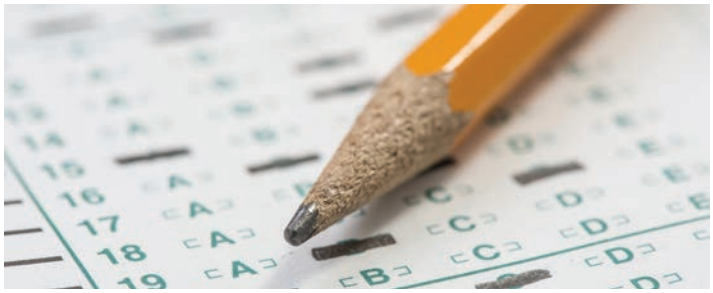
Source: California Department of Education, Educational Demographics Unit

Regional SAT Scores, 2008-2013

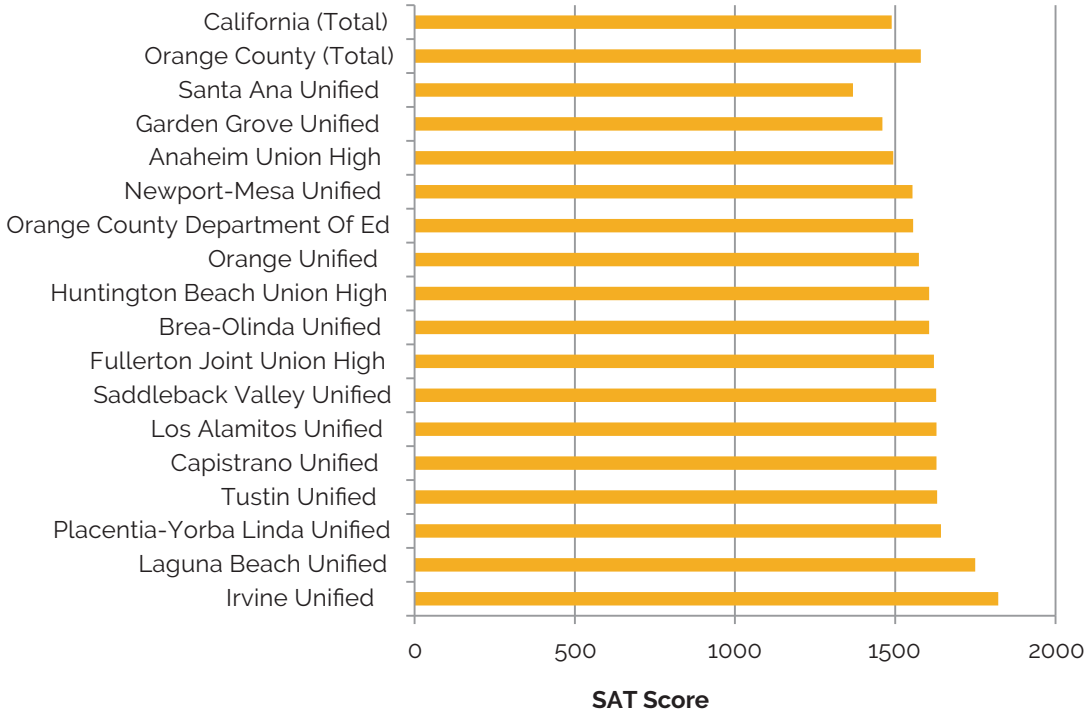


Source: California Department of Education, Educational Demographics Unit

Orange County features some of the best-scoring districts in the state on the SAT, as well as districts performing well under that level. Irvine Unified had the highest overall SAT scores with an average of 1,822, followed by Laguna Beach Unified at 1,750. However, performance changes since the previous year are mixed as Laguna Beach Unified's average grew by 43 points and Placentia-Yorba Linda Unified fell by 6 points. Only Garden Grove Unified and Santa Ana Unified underperformed compared to the state average.



Average Total SAT Scores by School District, 2013



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 or enter the job market. Improved English comprehension and fluency enables students to grasp academic concepts more quickly and clearly demonstrate their comprehension of classroom material; students who do not speak, read or write English fluently face serious limitations in Orange County's current and future job markets. Orange County must improve its English language education in order to better prepare its students for higher education and the workplace. This, in turn, will fuel economic growth by providing local businesses with a qualified workforce.

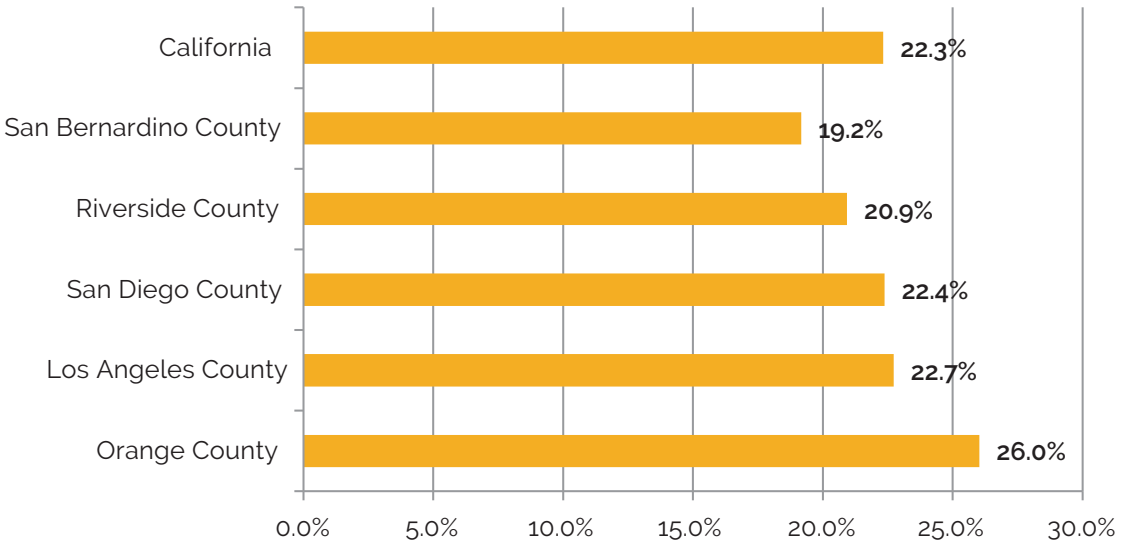
How Do We Know This Issue Exists In Orange County?

Over the last decade, Orange County experienced positive trends in English language fluency (students designated as "Fluent English Proficient" (FEP)). Following a slight drop in 2011, FEPs have steadily risen over the past two years, almost overtaking the number of students designated as "English Language Learners" (EL) in 2013.

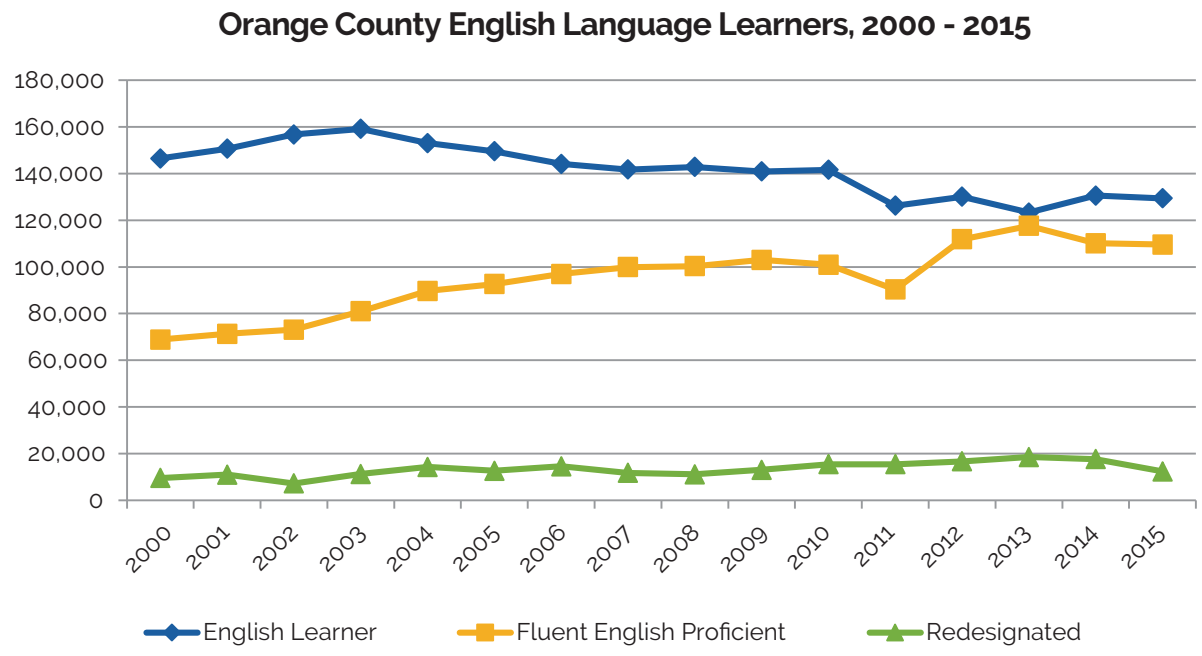
However, 2014 and 2015 saw FEPs decrease, falling by roughly 7,500 to a total of 110,114 in 2014, and falling by an additional 539 to 109,575 in 2015. Meanwhile, ELs proportionately increased in 2014 before experiencing a 1,180 decrease in 2015. During the 2014 to 2015 school year, 26 percent total students enrolled were ELs — the highest in the state. This represents a 0.1 percent decrease since the previous year and made Orange County's population of ELs is over 3 percentage points greater than their nearest comparison region, Los Angeles County, and almost 4 percent higher than the state average. This indicates the need for continued emphasis on English language programs.

> *Orange County's population of ELs is over 3 percentage points greater than their nearest comparison region... and almost 4 percent higher than the state average; this indicates the need for continued emphasis on English language programs.*

English Learners as a Percent of Total Enrollment, 2014 - 2015

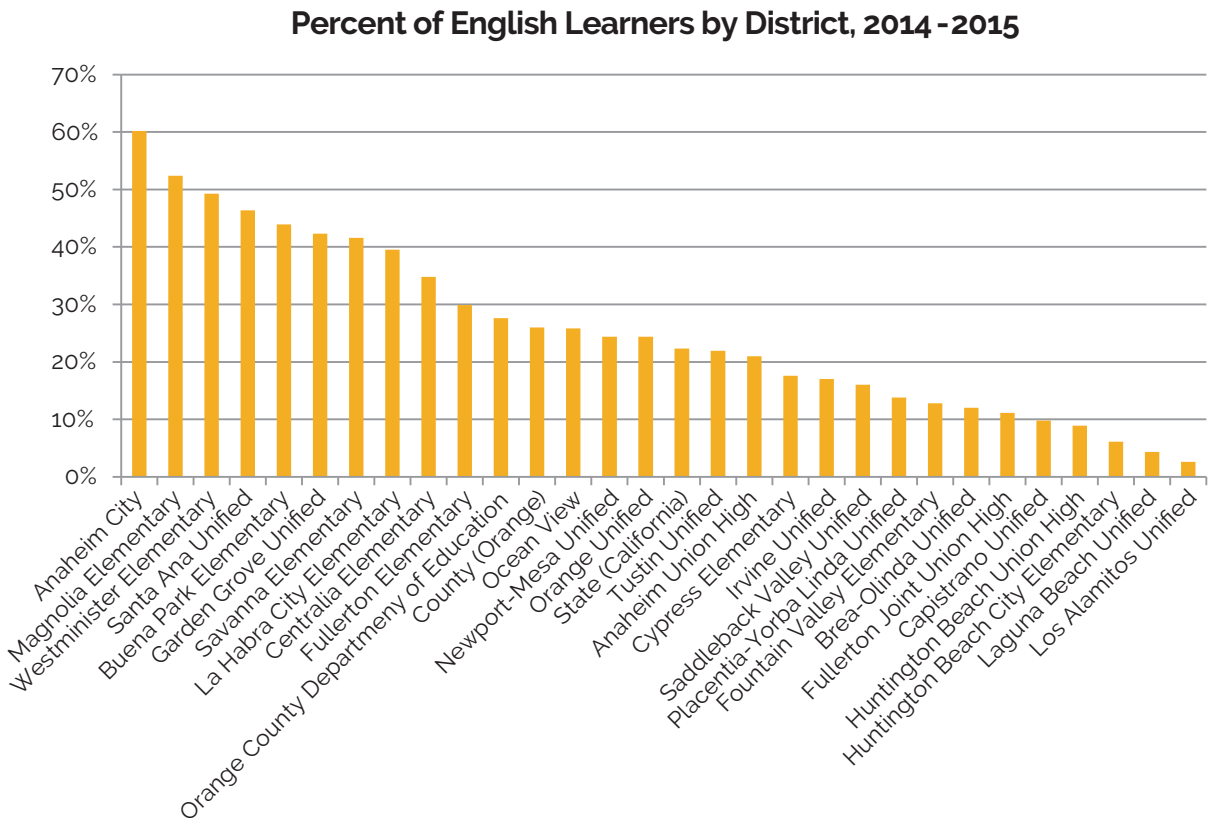


Source: California Department of Education, Educational Demographics Unit



Source: California Department of Education, Educational Demographics Unit

Among primary school districts, Anaheim City school district had the highest rate of ELs (60.2 percent), followed closely by Magnolia and Westminster Elementary. For secondary school districts, Santa Ana Unified and Garden Grove Unified contained the highest proportion of ELs, both significantly higher than the county average. The relatively high enrollment levels of Latino and Asian students in these school districts helps explain the proportionally higher number of English language learners when compared to other districts. In the 2014 to 2015 school year, Santa Ana Unified had a total enrollment of 56,815 students, with Latinos accounting for 93.3 percent of students. At Garden Grove Unified, 54.1 percent of students were Latino and 33.4 percent of students were Asian out of a total enrollment of 46,177 students.



Source: California Department of Education, Educational Demographics Unit

WHAT ARE ENGLISH LANGUAGE LEARNERS?

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 (grades K-12) assessment procedures – 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. Students can be initially identified as FEP or graduate from Limited English Proficient (LEP) or English Learner (EL) status to FEP.

DROPOUT RATES

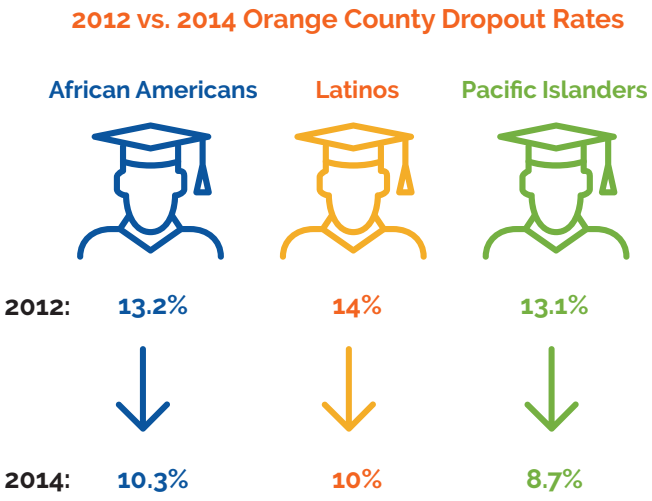
Improving Orange County's high school dropout rate will help build a better educated, better prepared workforce for the future. Orange County must supply its students with the tools and resources to stay in school and improve their lives by becoming prepared for post-secondary education and gainful employment.

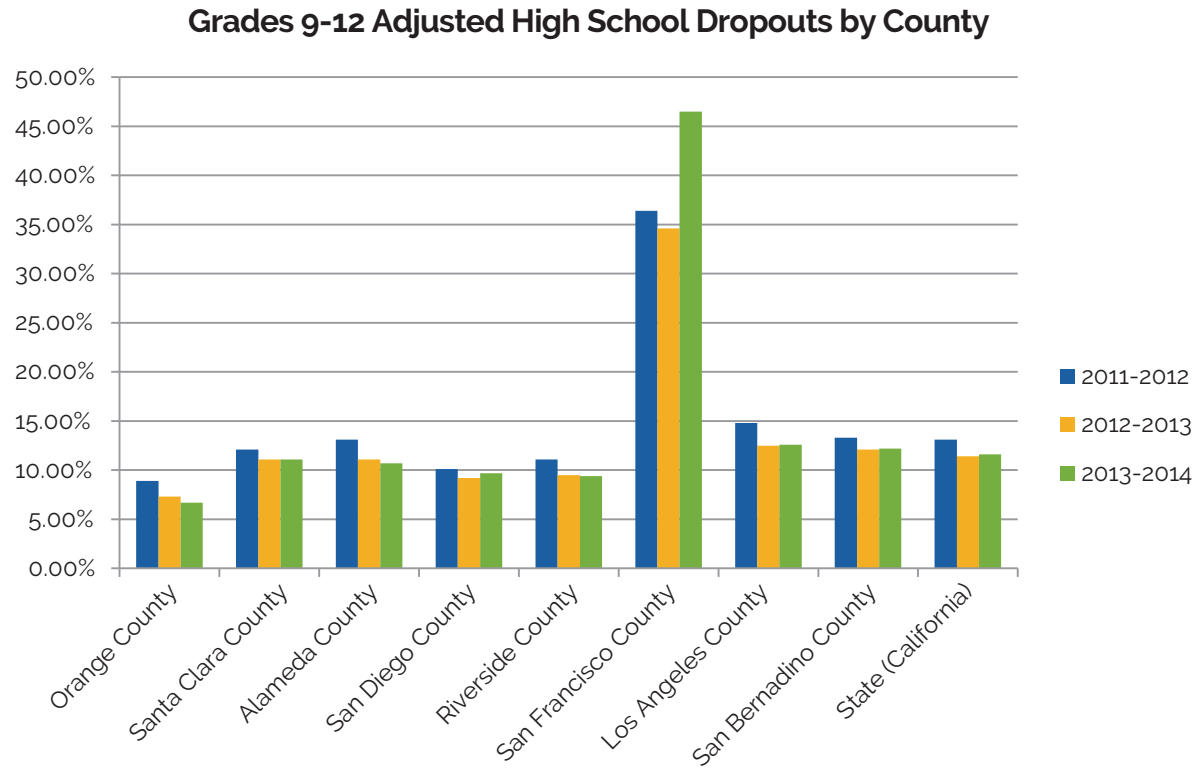
Why Is This an Issue?

While Orange County continues to enjoy the benefits of lower overall student dropout rates compared to state and national dropout averages, students continue to drop out at significant rates. Many Orange County schools are recognized as being amongst the best in the state and have developed an academic culture sufficient to motivate and encourage their students to stay in school. However, many students at underperforming schools lose academic motivation without realizing the importance of higher education. Therefore, Orange County must institute programs that communicate the importance of education to students.

How Do We Know This Issue Exists In Orange County?

Orange County has the lowest dropout rate in California at 6.7 percent, a 0.6 percent improvement from last year; Riverside County (9.4 percent) and San Diego County (9.7 percent) rank second and third in the state, respectively. While the overall dropout rate fell to single digits, dropout rates continue to be significantly higher for some populations such as English Learners, the socioeconomically disadvantaged, and some ethnic communities. More specifically, the dropout rates in 2014 for Orange County African Americans, Latinos and Pacific Islanders was 10.3 percent, 10 percent, and 8.7 percent, respectively, — all higher than the County average for the same time period. While still high, these rates did gradually improve as African Americans, Latinos, and Pacific Islanders averaged dropout rates of 13.2 percent, 14 percent, and 13.1 percent, respectively in 2012, and 12.6 percent, 11.3 percent, and 8.7 percent in 2013.





Source: California Department of Education, Educational Demographics Unit

Note: San Francisco County increases due to Five Keys school district adult rehabilitation centers being included in dropout totals. Excluding these outliers, San Francisco Unified's dropout rate was 10.1 percent in 2011-2012, 9.0 percent in 2012-2013, and 10.4 percent in 2013-2014.

STEM RELATED DEGREES

The majority of future high-paying job opportunities in Orange County will be clustered around the STEM disciplines (Science, Technology, Engineering and Math) in high-tech industries. STEM businesses and related knowledge-based high-tech clusters are projected to grow much faster than the overall economy and create additional jobs in other sectors through 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?

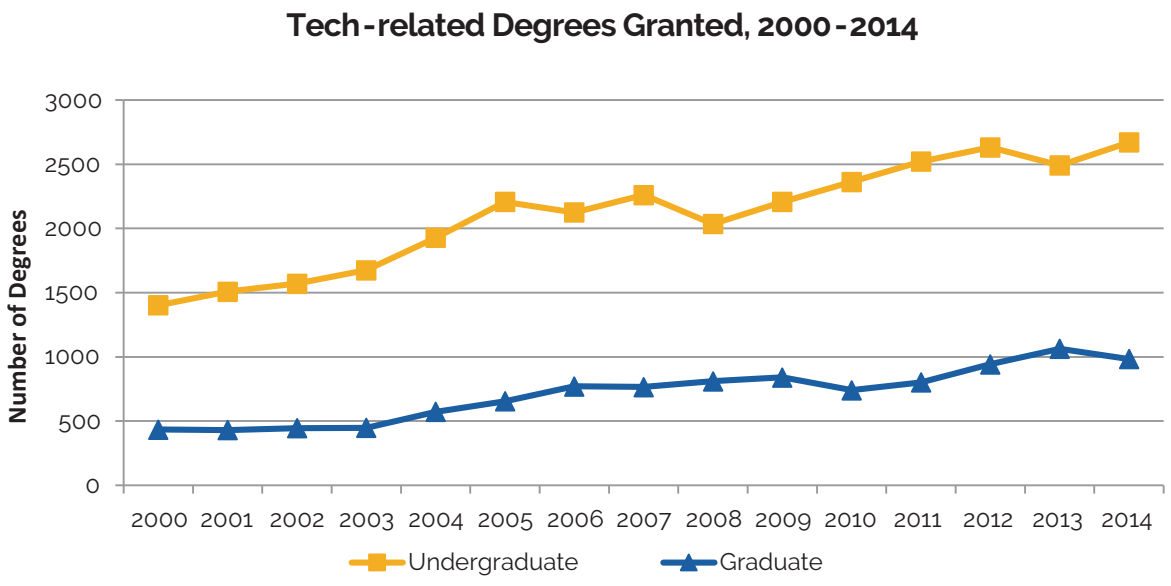
Orange County has a long history of science and technology-based business, beginning with the prominent defense and aerospace companies that engaged the county's educated workforce in the 1960s and 1970s. Today, many of the most prominent high-growth industry clusters revolve around biomedical technology, 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.

Discipline	2014		2004-2014	% Change
	Bachelor's Degrees Granted	Graduate Degrees Granted	Bachelor's Degree Change	Graduates Degree Change
Biological Sciences	1070	80	18,610	21,300
Engineering	808	438	7,560	9,010
Information and Computer Sciences	343	284	6,080	7,430
Physical Sciences	313	125	4,990	5,750
Math	137	56	3,770	5,130
Total	**2,671**	**983**	**38.4%**	**77.6%**

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 next two years, with an 8.5 percent increase in 2009 and a 7 percent increase in 2010. More recently from 2012 to 2013, STEM-related undergraduate degrees experienced a 5.4 percent decrease while STEM-related graduate degrees increased 12.8 percent. However, this trend reversed from 2013 to 2014, with STEM-related undergraduate degrees increasing by 7.2 percent while STEM-related graduate degrees fell by 7.5 percent. Since 2004, the STEM majors with the highest growth are Physical Sciences and Engineering, with 132 percent and 76 percent growth respectively. Despite overall strong growth between 2004 and 2012, between 2013 and 2014 nearly all STEM-related graduate degree programs experienced a slight decrease in the number of graduates except for Information and Computer Science, which experienced marginal growth.

While STEM degrees amounted to roughly 20 percent of all Orange County degrees awarded in the last year, employer demand for STEM-related talent continues to increase. Orange County's education and workforce training institutions must continue building STEM capacity to keep pace with accelerating demand.



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

Section 5: Industry and Occupation Trends

Orange County employment levels have been making a steady come-back since the Great Recession, with unemployment rates reaching near pre-recession numbers. It is important that county stakeholders focus on the education, workforce and economic development programs that continue to support job creation in the key industries that push the economy forward.

UNEMPLOYMENT

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. Orange County's accelerated job creation and economic growth continues to enhance its reputation as an economic engine, center of innovation, and entrepreneurial hub.

Why Is This an Issue?

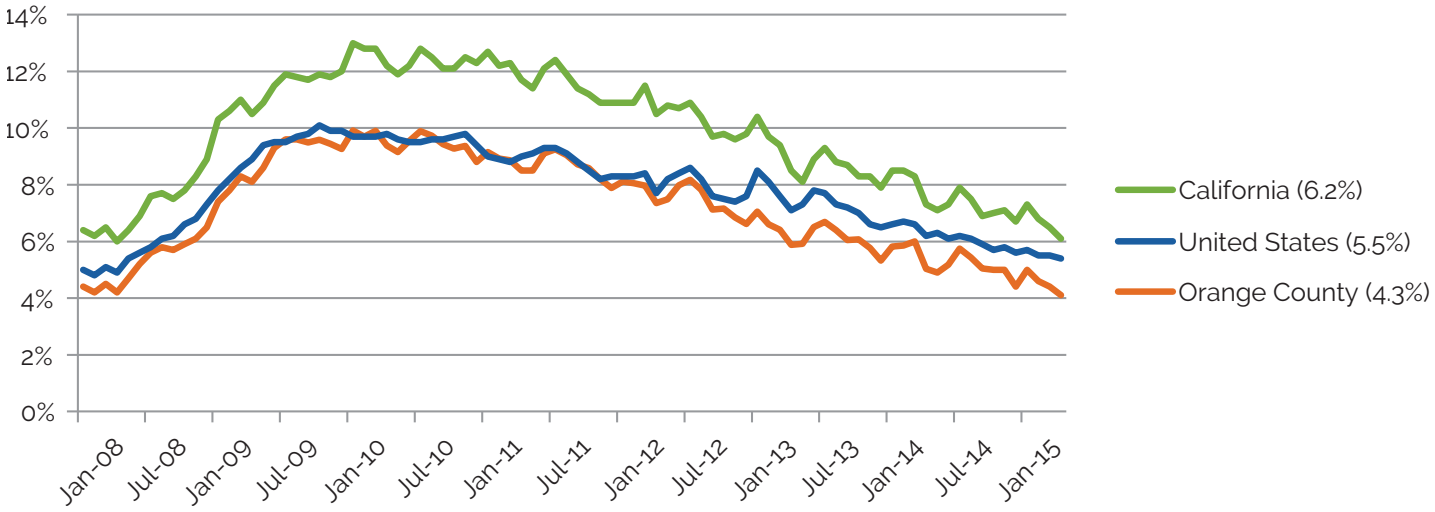
As it recovers, Orange County is slowly approaching pre-recession levels of employment. The county has almost completely recovered and must ensure that its residents find gainful employment that will allow the region's current and future workforce to afford to live and thrive. Over the past year, the unemployment rate to one of the lowest in the state as the county's unique strengths continue to drive job growth, including:

- Excellent academic institutions providing world-class education;
- A diverse and well-educated pool of potential employees;
- Strong and varied cluster industries providing high wages;
- Unparalleled support systems provided by workforce development institutions; and
- A unique geographic location that both connects Southern California globally and continues to attract well-educated foreign students and workers.

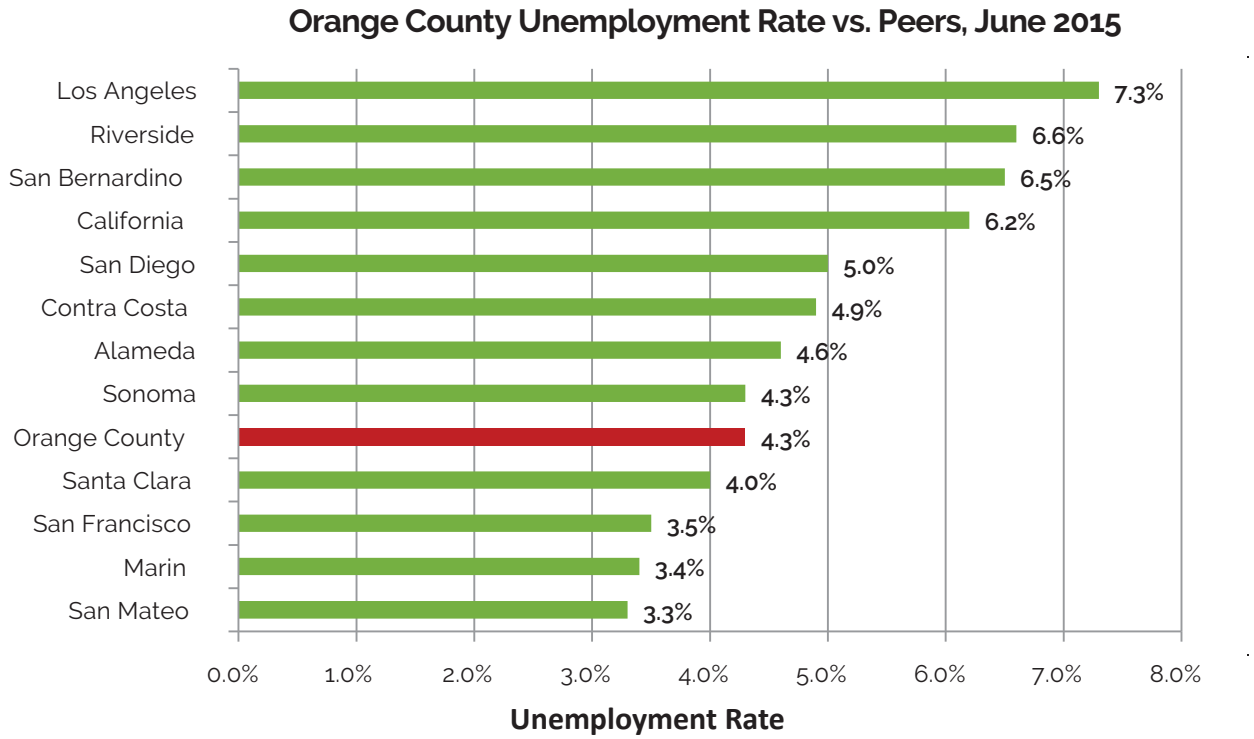
How Do We Know This Issue Exists In Orange County?

At the beginning of 2015, Orange County's unemployment fell below five percent and it is predicted to stay the same or drop even further in the near future. Orange County is performing exceptionally well compared to its peers as the June 2015 unemployment rate of 4.3 percent was the lowest in Southern California and the 5th lowest in the state. Job creation in the last year was spread relatively evenly across most sectors, with the largest gains occurring in Educational and Health Services (11,900), Professional and Business Services (7,100), Construction (6,300), and Manufacturing (5,800).

Orange County Unemployment Rates Jan. 2018 - June 2015

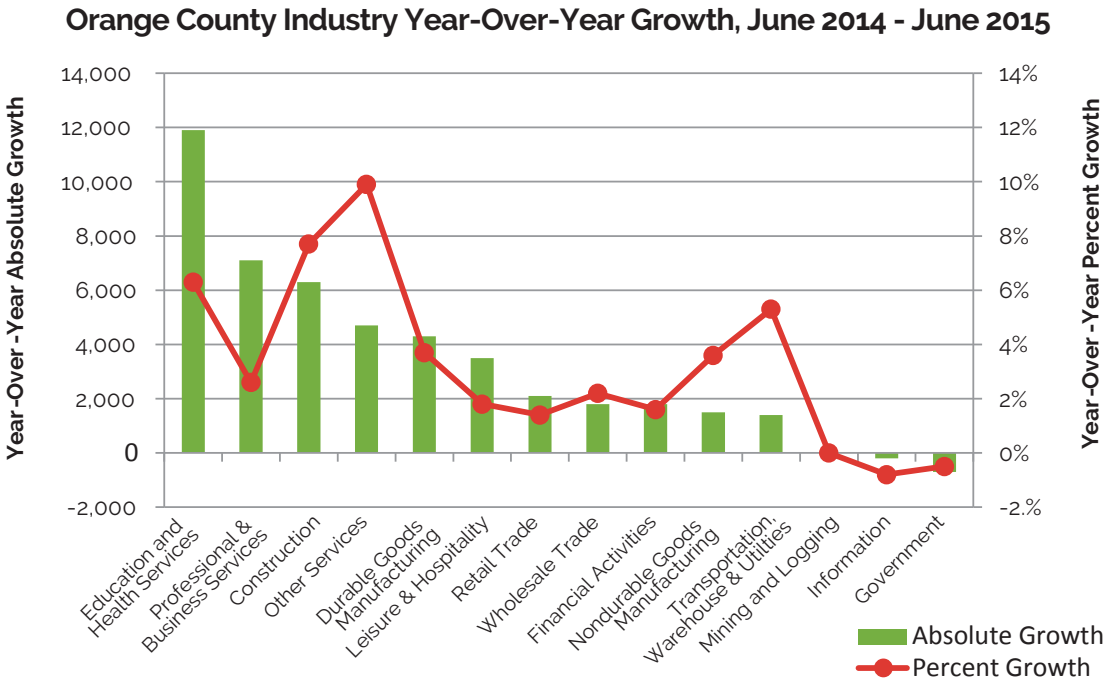


Sources: California Employment Development Department; U.S. Bureau of Labor Statistics



Sources: California Employment Development Department; U.S. Bureau of Labor Statistics

Orange County's unique strengths allowed it to recover more quickly from the Great Recession than most counties in the area, serving as an economic engine for the Southern California region. Despite being hit proportionally harder by the housing crisis than many other areas, Orange County's housing sector rebounded extremely well and is on track to surpass pre-recession levels, with the average housing price of a single-family home reaching $615,000 in May 2015. Over the past five years, the county added an estimated 2,368 jobs per month, decreasing its unemployment rate from a high of nearly 10 percent to 4.3 percent. County employers added over 45,000 jobs in the past year alone, a 3 percent increase over June 2014 employment levels. On a percentage basis, other services had the highest year-over-year growth with 9.9 percent, followed by construction at 7.7 percent, and education and health services with 6.3 percent growth. Only two industries lost jobs over the past year — Information and Government, which lost 0.8 and 0.5 percent of their jobs, respectively.



Source: California Employment Development Department

INDUSTRY CLUSTER EMPLOYMENT AND COMPENSATION TRENDS

Orange County's importance to the overall Southern California economy emphasizes the need for county stakeholders to support the industries that continue to create jobs and push the economy forward. 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, Tourism, Advanced Manufacturing, and Health Care are all key drivers of the Orange County economy and continue to generate well-paying job opportunities. These regional industry clusters provide both job growth and high wages and continue to increase the county's competitive advantage.

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/concentration**—in other words, more concentrated than average;
- **High growth rates**—significantly higher than average growth rates compared to other sectors;
- **High multiplier effects**—not all jobs are equal in terms of their effects 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, **a legacy of world-class iconic industry leaders** – Disneyland Resort, The Boeing Company, and Broadcom are examples of key reasons Orange County has competitive advantage in the tourism, advanced manufacturing, and IT industry clusters, respectively.

> ***The industry clusters highlighted in this section, which represent nearly 75 percent of all jobs in Orange County, drive county employment and economic growth.***

Clusters represent a self-sustaining cycle of employment, innovation, productivity, and competitive advantage in a specific industry and geographic location as exemplified by 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. This brings cash back to the region from outside its borders, increases local wealth and prosperity, and benefits local businesses with increased resident spending. Industry drivers are emerging industries found in a majority of industry clusters, as illustrated in the Cluster Overlay section which can be found on page 20, and help to drive employment growth from within those specific clusters.

The industry clusters highlighted in this section, which represent nearly 75 percent of all jobs in Orange County, drive county employment and economic growth. Regional specialization allows for the critical mass that fuels these industries' success because it furthers both cooperation and healthy competition as well as reduced logistical costs and a specialized labor pool.

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. By strengthening its emerging industry clusters and industry drivers, the county can create increased economic activity through an ongoing cycle of innovation, new business creation, and multiplier effects.

These industry clusters fueled rapid economic expansion and led to many of the county's competitive advantages. Therefore, Orange County must continue to support these clusters in order to further its upward trajectory.

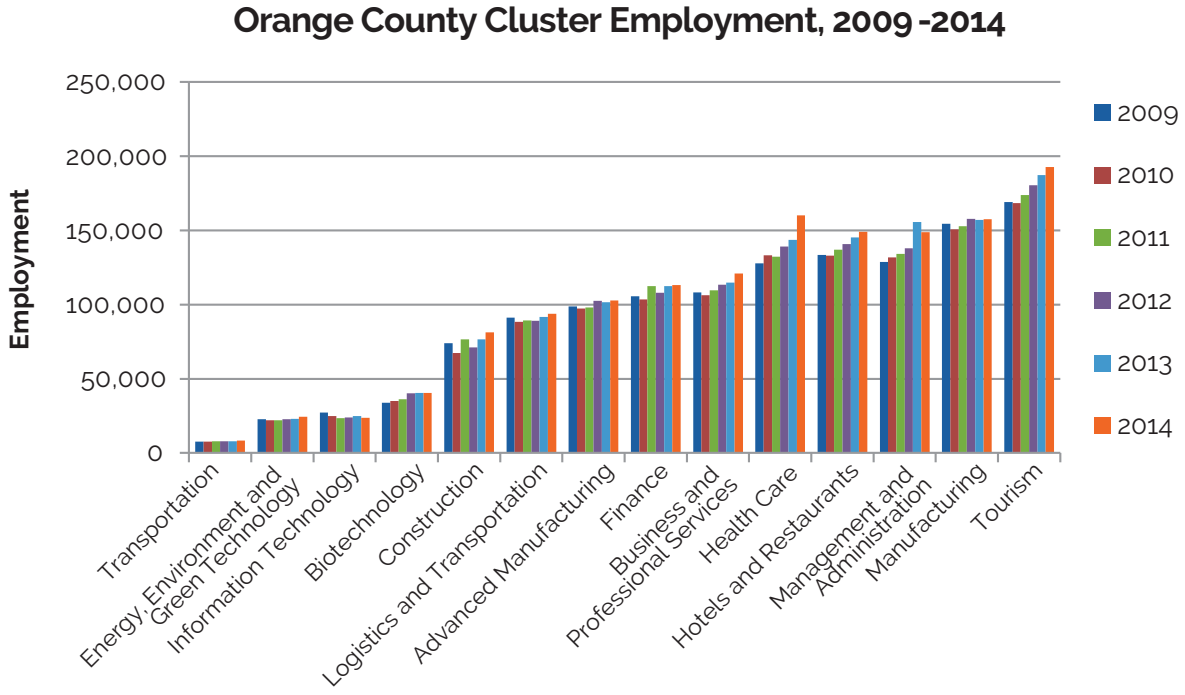
Cluster formation provides several regional benefits:

- Greater cash inflows;
- A "pipeline" from specialized education into in-demand careers;
- A skilled labor pool with high expertise;
- Reduced environmental impact through more efficient supply-side management; and
- Growth in cluster-supporting legal, accounting, and consulting services that support the region's overall economy.

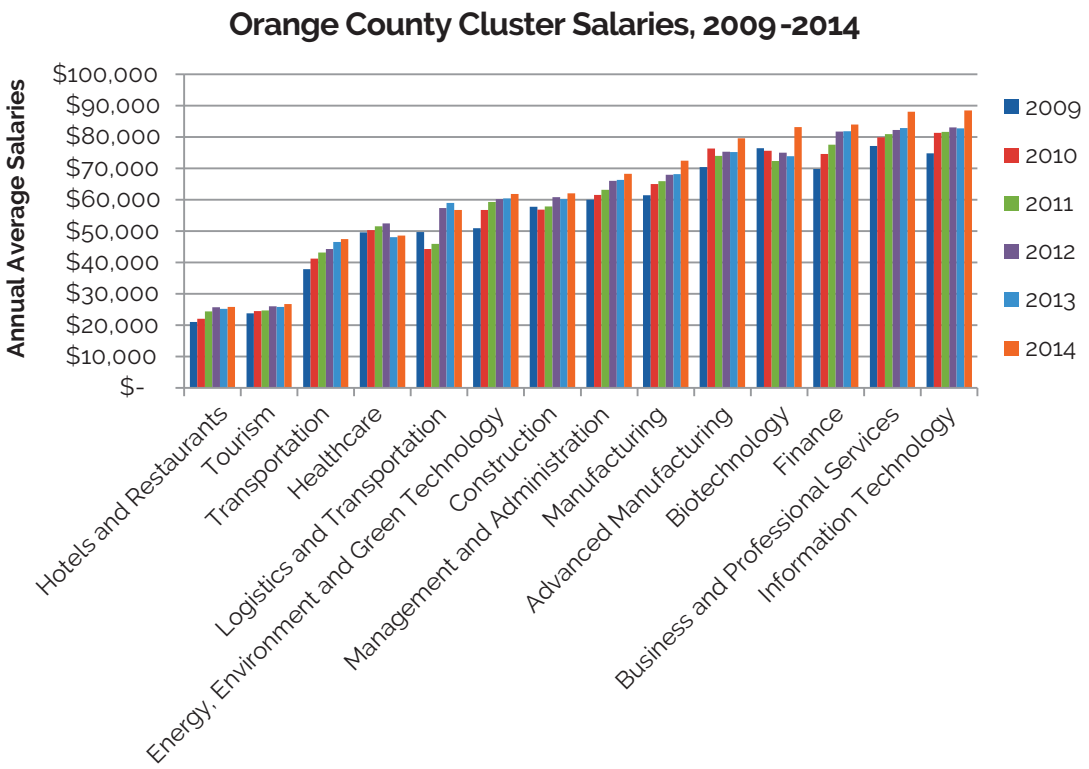
Individual firms in a cluster benefit from similar advantages, such as access to a common pool of specialized labor, intellectual property access within the region, and streamlined transaction and transportation costs.

Overall cluster employment added to growth in 2015. As one of California's major travel destinations, tourism in Orange County continues to expand and remains largest industry, increasing by 2.8 percent — a total of 5,312 jobs — in 2014.Health Care led all clusters in terms of both percent and absolute job growth by adding a staggering 16,669 jobs — an 11.6 percent increase over the year. The Construction industry saw the second highest percentage growth at 6.5 percent (4,882 jobs), followed by the Green Technology sector at 5.3 percent (1,219 jobs). Only two sectors — Information Technology and Management and Administration lost jobs in 2014 — these industry clusters lost 1,133 and 6,946 jobs, respectively. While any decrease in employment is troubling, these decreases are doubly significant because they come from extremely important sectors in the county's economy.

In order to remain economically competitive and prosperous, Orange County must continue to provide high-multiplier industry clusters with the tools they need to continue their growth. The Information Technology sector, for example, provides much higher wages to its employees than the county average. Losing jobs in this sector not only limits both the county's ability to remain competitive in the IT field, but also stunts county residents' ability to find high-wage positions. This becomes especially relevant with clusters such as Information Technology and Biotechnology, which both expand the county's technology base and establish it as a center for innovation. Technology will leave many regions and industries behind as it continues to evolve if active steps are not taken. The county must support these innovative clusters in order to stay relevant and maintain its competitive edge.



Source: OCBC analysis of California Employment Development Department QCEW dataset



Source: OCBC analysis of California Employment Development Department QCEW dataset

Almost all of Orange County's industry clusters experienced salary growth during 2014, with salaries rising an average $2,631 — or 4.3 percent — over the 2013 average. The average industry cluster salary is almost $10,000 — or 18 percent — higher than the average county wage, highlighted by significant increases in the last year in compensation experienced by the IT, Business & Professional Services, Biotechnology, and Advanced Manufacturing clusters.

> *As rent and home prices continue to climb, it becomes even more important that residents find gainful employment and earn a living wage.*

The largest absolute and percentage increases in average salaries between 2013 and 2014 were in Biotechnology, which increased by $9,296 — or 13 percent — followed by Information Technology, which increased by $5,749 — or 7 percent — and Business and Professional Services which increased by $5,164 — or 6.2 percent. One industry cluster, Logistics and Transportation, saw its average salary fall by $2,305 — or nearly 4 percent — since 2013. Health Care, one of Orange County's most important industry clusters, saw an 8 percent decrease in salary levels from 2012 to 2013 just as employment levels began to recover. During 2014, average healthcare salaries increased by less than a 1 percent. However, the continuing need for Health Care employees, such as registered nurses, will tend to drive up compensation and should encourage policymakers to make employment an attractive option for residents. As rent and home prices continue to climb, it becomes even more important that residents find gainful employment and earn a living wage. Several factors, including the lack of high-wage positions and career advancement opportunities, will encourage residents to move to areas with a lower cost of living. County employers can avoid this exodus of workers by closing the skills gap and providing jobs at all education levels.

The Biotechnology, Finance, Business and Professional Services, and Information Technology clusters all pay average salaries of over $80,000, well above the average Orange County salary. Advanced Manufacturing, another important industry in terms of skills, almost reached this level in 2014 by increasing its average salaries by $4,308 — or 5.7 percent from 2013 levels. These high-salary industries deepen the local talent pool by attracting well-educated workers and providing multiplier effects that benefit the county as a whole. Industries such as Tourism, which encompasses hotels and restaurants, have lower wage levels and primarily employ low-skill workers. Orange County must ensure that these workers have the access to training and educational programs that will allow them to advance up the career ladder. These traditionally low-skill industries, including Health Care, which provided an average salary of less than $50,000 in 2014, must encourage their employees to access these resources and become a part of the county's continuing workforce development.

OCCUPATIONAL GROWTH TRENDS

Focusing on education, workforce, and economic development programs that support job creation 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 jobseekers.

Education and workforce training programs lay the foundation for future high-growth, high-wage, high-multiplier occupations. Access to these programs will create job opportunities and give county residents the tools they need to climb the career ladder.

Why Is This an Issue?

Although the Great Recession caused significant layoffs in many high-wage occupations and industries, the county has made significant progress in increasing job availability and lowering unemployment. However, much of the job growth in Orange County, and the nation as a whole, has come at the lower end of the wage scale with high numbers of part-time positions and independent contractors. As the economy continues to improve, county stakeholders must support a talent pool able to fill high-wage occupations.

As the economy continues to improve there must be emphasis on the importance of the attraction and creation of higher-wage occupations to meet the demands of emerging roles. These occupations allow Orange County to maintain its reputation of economic vitality and a high quality of life — attributes that attract corporations, workers, and entrepreneurs to the region.

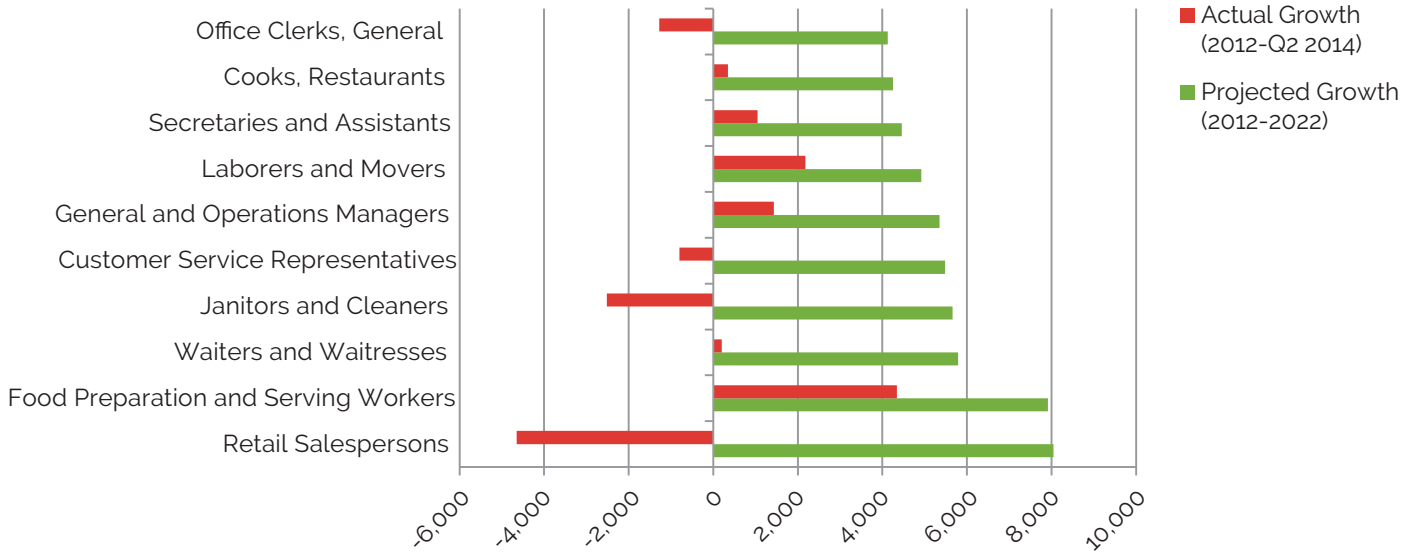
How Do We Know This Issue Exists In Orange County?

The California EDD has seen mixed results in its attempts to predict job growth by sector. While EDD estimated that retail sales positions will grow faster than any other occupation and add nearly 8,000 jobs per year between 2012 and 2022, this sector actually lost 4,000 jobs since 2012. Other occupations predicted to grow significantly – janitors, customer service representatives, office clerks – have seen declines in overall employment. While EDD's occupational predictions might be borne out in the coming years, improved operational efficiencies and the rise of automation threaten employment prospects for many of these occupations.

Conversely, several occupations are on track to surpass EDD projections. Food preparation workers, which were predicted to add less than 8,000 jobs by 2022, have already added more than 4,000 jobs in the past two years. With the exception of general and operations managers, most of the occupations the EDD slated for the most growth by 2022 are low-wage, low-skill positions such as laborers, waiters, assistants and cooks. These entry-level positions were likely anticipated to expand in order to replace retiring Baby Boomers. Baby Boomers, however, are retiring much later than previous generations, preventing many young people from filling these positions.

> *Baby Boomers are retiring much later than previous generations, preventing many young people from filling these positions.*

Top 10 Occupations by Absolute Job Growth, 2012 - 2022

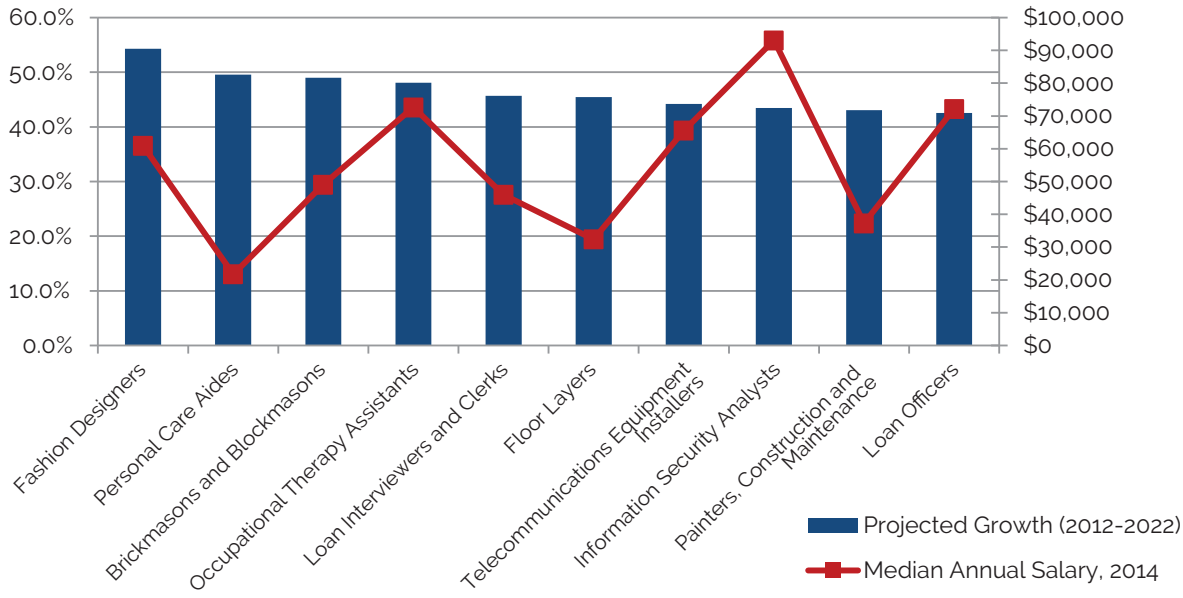


Source: OCBC analysis of California Employment Development Department QCEW dataset

The fastest growing occupations on a percentage basis are spread throughout industry clusters. Fashion designers, part of the Creative industry, are predicted to grow by over 50 percent while providing much higher-than-average wages of over $60,000. Following fashion designers, personal care aides are expected to expand by almost 50 percent; their lower barriers to entry, however, means that they make significantly lower wages, averaging $21.76. Information security analysts are another bright light for employment growth. Predicted to grow by 43.5 percent, this occupation provides an average salary of $93,088, much higher than the county average. The widespread adoption of technology in the workplace leaves many businesses vulnerable to cyber-attacks, which in turn increases the demand for information security analysts.

The fastest growing occupations in Orange County include both high- and low-wage positions. As mentioned before, stakeholders must support high-wage positions that allow the county to maintain its competitive advantages. However, lower-wage positions are also important because they often serve as the first rungs on the career ladder. Creating programs through partnerships with local, major business and educational institutions that offer programs at a low cost to these low-skill individuals will give these workers the opportunity to lift themselves out of these jobs and into more lucrative positions. Doing so will also help the county close the looming middle-skills gap, which has become a major threat to its future economic prosperity.

Average Salaries of Fastest-Growing Occupations in Orange County, 2012 - 2022



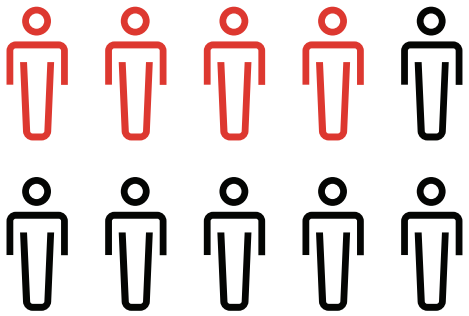
Source: California Employment Development Department, Bureau of Labor Statistics OES Data

Section 6: Veteran Employment in Orange County

The discipline, dedication and technical aptitude of military veterans make them an ideal fit for a wide variety of occupations. Establishing and maintaining programs designed to facilitate returning veteran labor market participation can both establish Orange County as a leader in providing a receptive home for veterans and create a high-level talent pool for local employers.

Why Is This an Issue?

Veterans bring experience, leadership and teamwork skills, and a solid work ethic to the companies that hire them; many companies also receive tax benefits for hiring veterans. In turn, veterans have in-demand technology skills that make them valuable in an increasingly high-tech job market. This is illustrated by the fact that nearly 38 percent of employed American veterans work in management, professional, and related occupations. Unfortunately, veterans face a much higher unemployment rate than their civilian counterparts and have a difficult time finding these lucrative positions. While resources such as One-Stop Career Centers already exist to serve veterans in the job market, policymakers should consider further initiatives to help veterans transition into stable civilian employment.



Nearly 38% of employed veterans work in management, professional, and related occupations

How Do We Know This Issue Exists In Orange County?

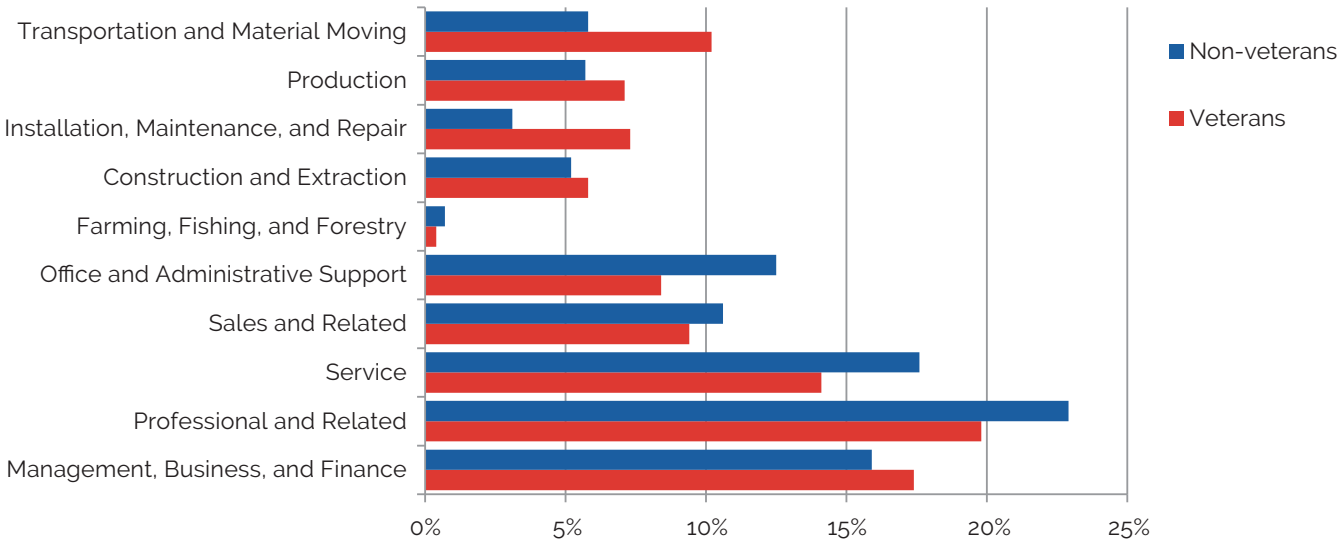
Unemployment among military veterans, particularly those under the age of 30, continues to be a problem for Orange County and the nation as a whole. California is a challenging region for veterans to find employment relative to the rest of the nation; in 2014, the labor force participation rate of military veterans was 47.9 percent in California, 2.7 percentage points below the national rate, which signifies that more than half of California's veterans are unemployed "discouraged workers" who are not actively looking for work.

Orange County currently has the third highest number of military veterans in the state with approximately 130,000 veterans residing in the county and an estimated 6,500 joining them every year. As evidenced by the low 47.9 percent participation rate for military veterans in California, local veterans aged 20 to 24 are about three times as likely to be unemployed as their civilian counterparts. While veterans have the skills and experience needed for gainful employment, many have struggled in Orange County's job market.

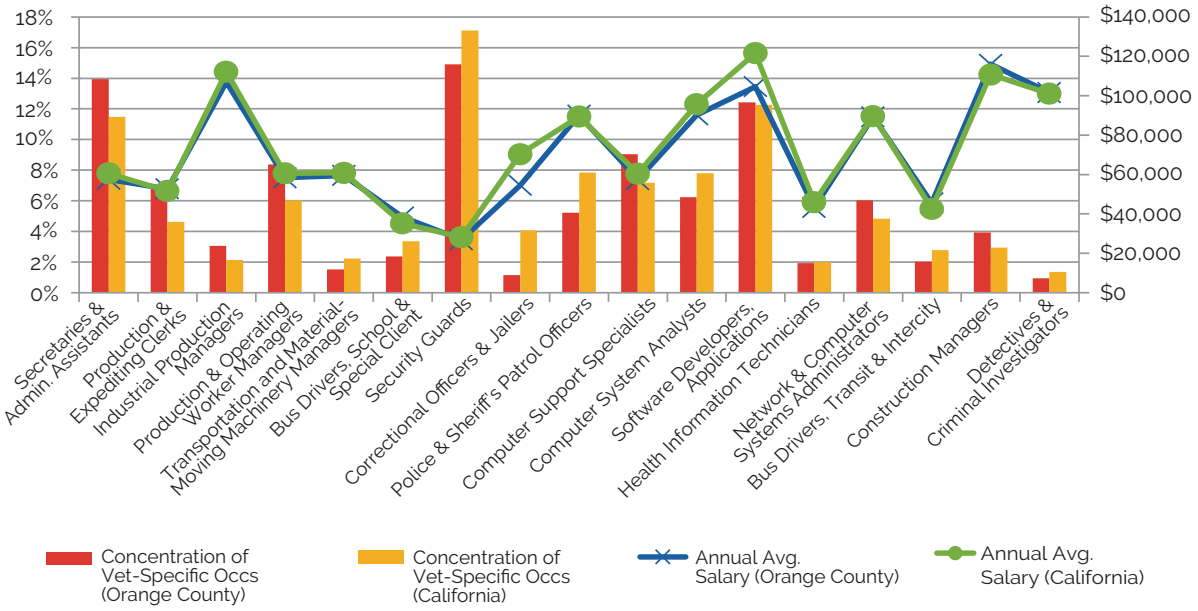
Fortunately, many of Orange County's fastest-growing industries align with veterans' transferable skills. Manufacturing, Professional Services, Education, and Health, all major industry clusters — are the largest employers of veterans in the county. All four sectors draw on veterans' transferable skills, including problem solving aptitude, experience with technology, communication and verbal comprehension, and conceptual organization. Orange County civic and corporate leaders can institute programs and partnerships to connect veterans with opportunities in these sectors.

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

Veteran vs. Non-Veteran National Employment by Occupation, 2014



Veteran-Friendly Occupation Comparisons Orange County vs. California, 2014



Source: California EDD

The chart above breaks these four sectors down into 17 occupations with prominent veteran employment opportunities. While the greatest levels of employment growth for Orange County within these occupations is in services such as secretarial work, security, and software development, 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 of these veteran-friendly occupations are concentrated in IT-related occupations, with another 35 percent attributed to logistics-oriented positions. Orange County can create the greatest good for new veteran employment by incentivizing veterans specializing in IT and logistics to find work locally, providing services tailored to help these specialists find secure — ultimately stimulating employment. Roughly 70 percent of employed veterans in IT- and logistics-related occupations. By incentivizing these veteran-friendly fields, local leaders can help veterans sustain secure employment.

> *Over 35 percent of these veteran-friendly occupations are concentrated in IT-Related occupations, with another 35 percent attributed to logistics-oriented positions.*

Local Programs and Collaboration Efforts

OC One-Stop Centers

The Orange County Workforce Investment Board (OCWIB) actively serves veterans' education, training, and employment needs by offering customizable employment services at the five One-Stops located throughout Orange County. The Garden Grove One-Stop Center, for example, regularly holds veteran-centric networking events twice a month, and supplements these opportunities with veteran-specific resume and career-searching workshops. The OCWIB's veteran support is not limited to employment services. However, under the OC4Vets program, the 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 veterans and their families.

Orange County Veterans Service Office

Located centrally in Santa Ana, the Orange County Veterans Service Office helps veterans and their dependents file for financial benefits and other services that they are eligible for. The Veterans Service Office guides claimants through the application process and provides veterans with the paperwork and documentation needed to receive benefits. OC Community Services, a division of the County of Orange, organizes veteran-specific events 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 (OCSARN), and the Orange County Veteran & Military Families Collaborative (OCVMFC) promote their regular meetings through the Veterans Service Office, and coordinate meeting outcomes with the wider veteran community.

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 OC 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.

OC Community Services provides numerous other resources for veterans, 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.

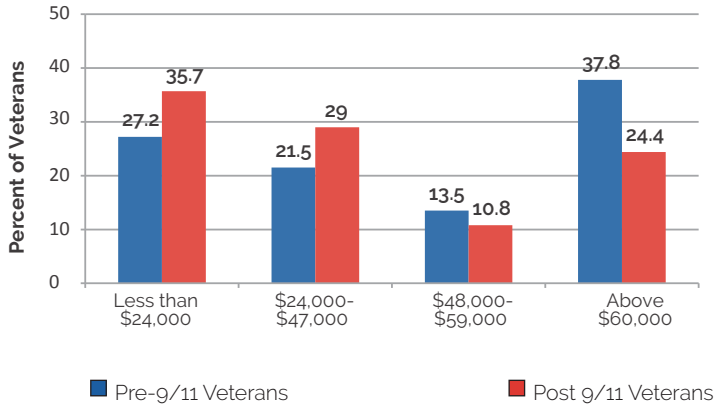
- **Service for Older Veterans** – The Office on Aging provides services such as caregiver support, home delivered and congregate meals, transportation, health education and information, and assistance to older veterans and their families.

Orange County Community Foundation

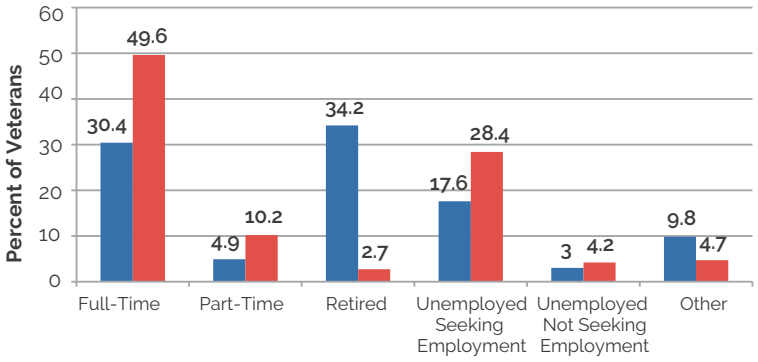
The Orange County Community Foundation (OCCF) recently collaborated with the USC School of Social Work to release the first-ever study on Orange County veterans in 2015. "The State of the American Veteran: The Orange County Veterans Study" which examines the challenges veterans face in their new civilian lives. A survey of nearly 1,300 Orange County veterans allowed the OCCF to identify key issues confronting returning Veterans and begin implementing solutions to, among other things, better help returning Veterans transition to suitable high-quality employment opportunities.

The study highlights the difficulties that post-9/11 veterans face compared to their pre-9/11 counterparts. While both groups report nearly equal levels of life satisfaction, nearly 28.4 percent of post-9/11 veterans reported being unemployed despite actively seeking employment compared to 17.6 percent of pre-9/11 veterans. Over 60 percent of post-9/11 veterans who have found a job in Orange County make less than the county's average wage. These statistics, along with the fact that more than 70 percent of veterans surveyed reported receiving no assistance with their job searches, points to the need for increased services for veterans entering the civilian job market. Orange County, which has one of the highest veteran populations in the nation, must emerge as a leader in helping veterans transition to civilian life.

Veteran Wage and Salary in Orange County, 2014



Veteran Employment in Orange County, 2014



Source: Orange County Community Foundation, USC School of Social Work

Section 7: Workforce Housing

In order to ensure plentiful and affordable housing options for Orange County's workforce, local jurisdictions must consider sufficient new housing development that meets the needs of the region's current and future workforce in order to ensure plentiful housing options for all county residents.

Why Is This an Issue?

Orange County's housing costs, including apartment rental rates, have recovered to nearly reaching pre-recession highs, and are higher than those of neighboring counties, peer regions in 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 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 residents to seek employment outside of Orange County, including skilled young adults that permanently move out of state to areas with lower housing prices. In the post-Recession climate, workforce housing is a critically important aspect of economic development and workforce talent retention. An in-depth understanding of major trends in workforce housing will help county policymakers and leaders address current needs and make informed decisions about the future of workforce housing in Orange County.

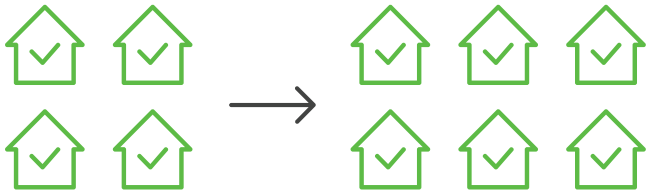
How Do We Know This Issue Exists In Orange County?

Orange County has long held the reputation of being one of the most expensive home-buying regions in the nation, even during significant economic downturns. While job creation and population growth continues to fuel long-term workforce housing demand, the Great Recession slowed housing construction. However, the Southern California real estate market has turned around with home prices rebounding dramatically since the start of 2013; residential building permit activity increased by nearly 50 percent from 2013 to 2014.

If unaddressed, workforce housing will limit the availability of workforce talent in Orange County.

With solid employment growth and declining unemployment rates, the county once again faces a deficit of sufficient housing supply options for its workforce. Both housing supply and affordability are primary concerns as average rental rates tend to be higher than in peer regions, forcing out recent graduates and others that struggle to afford the high cost of living. If unaddressed, workforce housing will limit the availability of talent in Orange County, threatening employment growth and economic development. The high cost of living impacts migration and new resident inflows and continues to pressure struggling residents to consider moving outside of the region. Without affordable housing options for young adults, the need for an increasingly skilled workforce to fuel continued growth in emerging high-growth clusters may not be filled.

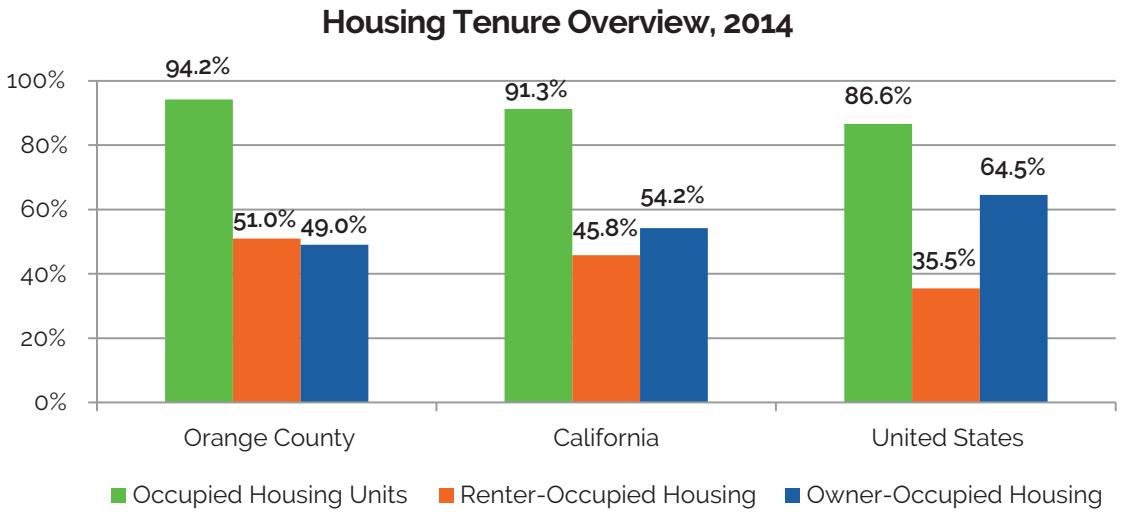
Residential building permit activity in Orange County increased by nearly 50 percent from 2013 to 2014.



Home Ownership

According to the American Community Survey, 57.5 percent of Orange County units are owner-occupied, while 42.5 percent are renter-occupied units. In general, Orange County has a smaller percentage of homeowners compared to state and national levels, with only 49 percent of all housing units occupied by owners compared to an average of 54.2 percent in California in 2014. Despite a higher concentration of renters, Orange County sports far fewer vacancies than California and the United States, with 94.2 percent of all housing units occupied.

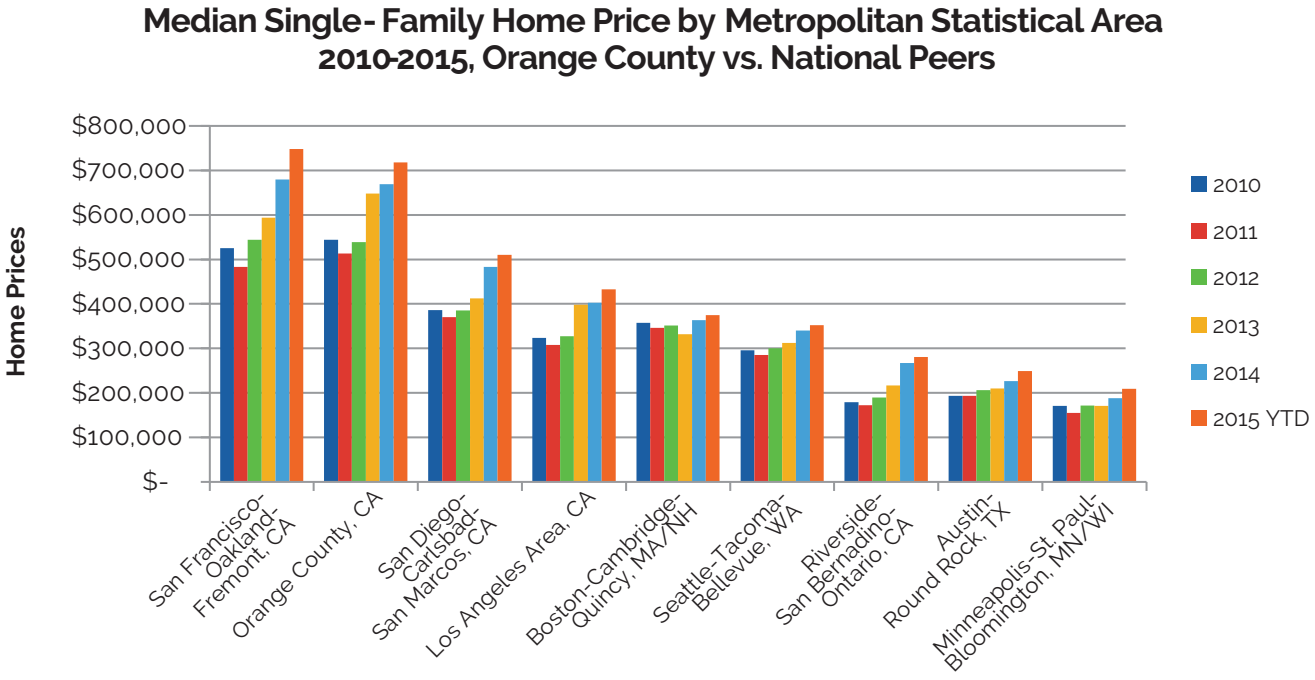
In May 2015, the California Association of Realtors (CAR) estimated that the Orange County median price of an existing single-family detached home was $717,850 — a 2.8 percent increase over May 2014's median price of $698,260 — indicating a continual rise in prices, though at a slower rate than the previous 12 months when home prices jumped dramatically.



Source: United States Census Bureau

Another clear indicator of Orange County's rebounding housing market and rising prices is the California Association of Realtors (CAR) Housing Affordability Index, which measures the percentage of households that are capable of purchasing an entry-level median-priced home in a given region; a score of 25 means that 25 percent of area households can afford such a home. 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 continues to decline each quarter. The county scored 22 for Q1 2015 — up one point from the previous quarter and from Q1 2014 — which both had scores of 21. Orange County's score of 22 for Q1 2015 was much lower than the national score of 61 and California's score of 34 for the same time period. This indicates that residents generally have a much harder time affording a home compared to other areas around the state and nation.

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 2015, CAR scored Orange County First-Time Buyer Index at 45, meaning 45 percent of new homebuyers can afford to purchase an entry-level home, a score which has persisted since last quarter and Q1 2014. Orange County is far below the Housing Affordability Index scores of California (55) and the United States (77) for Q1 2015. At a Q1 2015 estimated entry-level price of $610,172 with a 3.75 percent 30-year fixed mortgage rate and a 20 percent down payment, first-time home owners in need to earn at least $96,885 per year in order to quality for an entry-level housing unit.



Source: National Association of Realtors

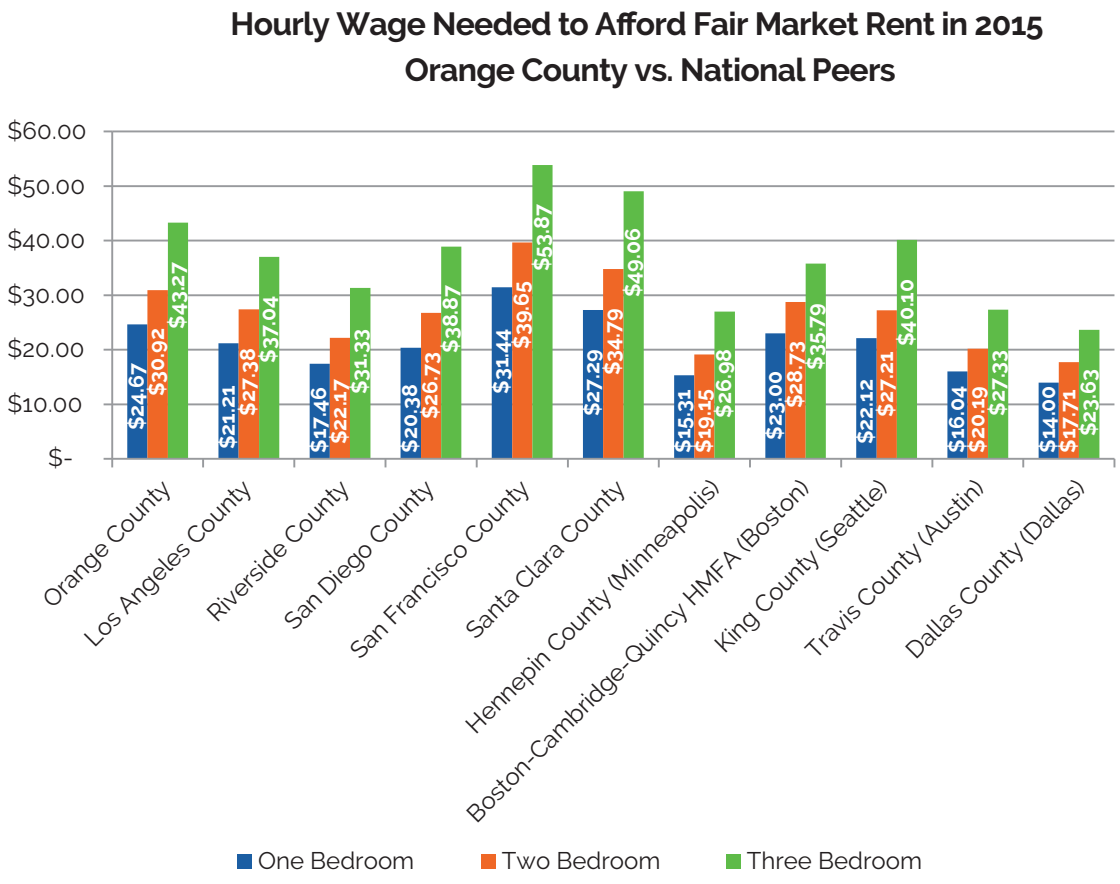
Renting in Orange County

As the economy continues to recover and home prices increase, average apartment rental rates have spiked. Orange County's average monthly rental rate for 2014 was $1,765, an increase of nearly 5 percent over the last year. Irvine commands the highest rental rates in Orange County, while Garden Grove, Anaheim and Fullerton are among the most inexpensive rental markets.

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 $24.67 per hour for a one-bedroom apartment to $43.27 per hour for a three-bedroom apartment in Orange County. Despite the recent marginal decrease, these rates 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 California counties, last year Orange County was second only to San Francisco County in one-bedroom wage requirements and behind only Santa Clara and San Francisco counties in two- and three-bedroom affordability wages. More recently, due to the high demand for apartments in the Bay Area and the subsequent rise in apartment rents, Orange County now trails Marin County, San Francisco County, San Mateo County,

Santa Clara County and Santa Cruz County in one-, two-, and three-bedroom affordability wages. The hourly wage needed for a one-bedroom apartment ($24.67) is equivalent to an annual income of about $51,320, while the annual renter income needed to afford a two-bedroom apartment at fair market rent is $64,320. Compared to the state, the average annual income required for a one-bedroom apartment would be $43,267 — 19 percent lower than that required in Orange County — and $55,433 for a two-bedroom apartment — or 16 percent lower than Orange County.



Source: National Association of Realtors

Section 8: Advanced Manufacturing, Healthcare, and Information Technology

Four key sectors – Advanced Manufacturing, Health Care, Informational Technology and Hospitality/Tourism – create pathways forward for Orange County by offering lucrative entry-level jobs and opportunities for career advancement. Orange County must align education and workforce training efforts to the needs of these growing industries.

Why Is This an Issue?

Advanced Manufacturing, Health Care, Information Technology and Hospitality/Tourism will play a major role in the future of Orange County's economy by offering county residents higher than average wages and the opportunity to climb the career ladder. All four clusters currently outpace state employment projects and create jobs at all levels of the educational attainment spectrum — from entry-level to executive positions. County policymakers should channel residents toward these lucrative positions through both traditional education and training programs as well as industry partnerships that provide jobseekers with hands-on experience.

Advanced Manufacturing

The Great Recession hit Orange County's Advanced Manufacturing Industry hard, causing a 20 percent drop in employment from 2006 to 2010. While the sector has partially recovered — climbing back to 164,300 jobs in June 2015 from a low of 148,200 in 2010 — it has still not returned to the pre-recession high of 183,800 jobs in June 2006.

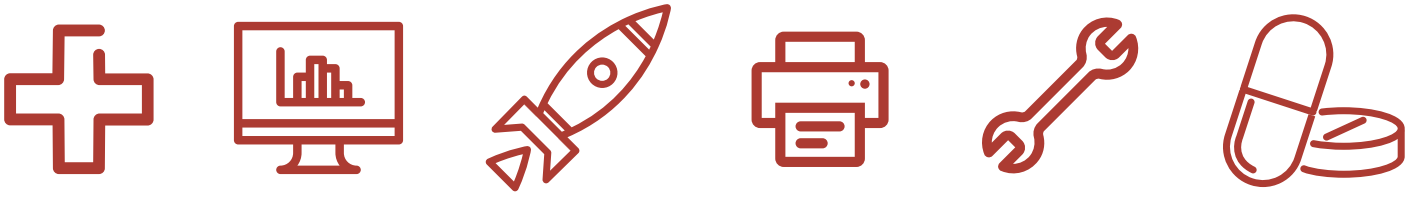
The Advanced Manufacturing sector, however, has recovered much faster than manufacturing as a whole in Orange County and offers both relatively high wages and an upward trajectory. Advanced Manufacturing in Orange County, which includes medical devices, computer and electronic products, aerospace products, printing, fabricated metal products and pharmaceuticals, has a comparatively low barrier to entry; numerous county educators offer the required degrees or training certificates, most of which involve some degree of on-the-job training.

Advanced Manufacturing sets itself apart from traditional "smokestack" manufacturing through its high tech products and efficient manufacturing process. Nearly 55 percent of Orange County manufacturing falls under this category, which emphasizes the need for a well-trained Advanced Manufacturing talent pool. While educational and training programs do exist in this field, a lack of interest among county residents has led to significant skills shortages. Unfortunately, manufacturing has the reputation of being an industry with a preponderance of low-paying, dead-end jobs. This perception has led many skilled workers to avoid manufacturing, leading the industry with a shortage of workers with needed STEM skills. On the bright side, this has also lead to a number of open positions which should help attract qualified workers and can potentially close the industry's skills gap.

Occupation	Skills Shortage Today (% of Companies)	Skills Shortage by 2020 (% of Companies)	Average Time to Fill Open Positions
Skilled Production Workers	54%	63%	70 days
Engineers	33%	48%	94 days
Research Scientists	28%	37%	94 days

Source: The Manufacturing Institute / Deloitte Consulting

Advanced Manufacturing in Orange County includes:



Medical Devices

Computer and Electronic Products

Aerospace Products

Printing

Fabricated Metal Products

Pharmaceuticals

Key Advanced Manufacturing Industry Trends

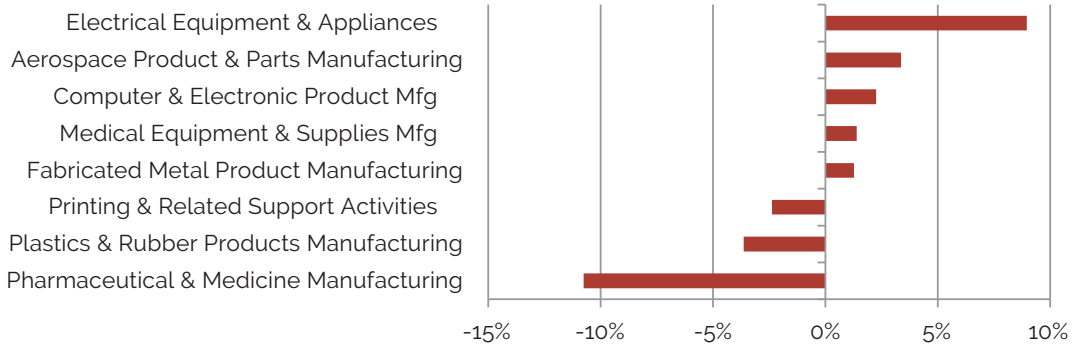
While some sectors experienced losses over the past year, the Advanced Manufacturing industry has experienced general employment growth for both high- and low-skill positions.

Computer and electronic product manufacturing has seen the highest absolute growth over the past year with 725 jobs, followed by electrical equipment and appliances with 402 jobs, and aerospace product and parts manufacturing with 366 jobs. Electrical equipment and appliance manufacturing saw the highest percentage growth at 9 percent, followed by aerospace product and parts manufacturing at 3.4 percent. Computer and electronic product manufacturing, the best-compensated Advanced Manufacturing sector in Q4 2014, saw a 15 percent salary hike over the last year. The fact that no sector saw a decrease in compensation speaks to the continuing health of this industry; even aerospace product and parts manufacturing, which typically requires low-skill workers, saw a 13.5 percent or $11.804 increase in salaries since Q4 2013.

Industry Title	Employment		Average Salary	
	Q4 2014	YoY Change	Q4 2014	YoY Change
Computer and Electronic Product Manufacturing	32,985	725	$115,492	$15,236
Fabricated Metal Product Manufacturing	23,637	296	$63,908	$3,900
Medical Equipment and Supplies Manufacturing	18,927	260	$78,936	$8,164
Aerospace Product & Parts Manufacturing	11,241	366	$99,216	$11,804
Printing and Related Support Activities	7,844	(192)	$51,168	$2,704
Plastics & Rubber Products Manufacturing	7,866	(297)	$58,344	$4,680
Electrical Equipment and Appliances	4,889	402	$68,848	$1,196
Pharmaceutical & Medicine Manufacturing	3,750	(452)	$64,740	$3,172

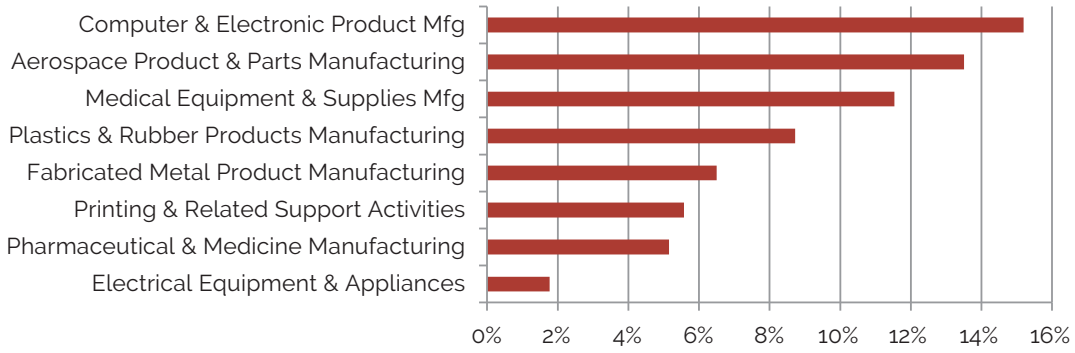
Source: California EDD, QCEW Dataset

Orange County Year-Over-Year Change in Advanced Manufacturing Employment



Source: California EDD, QCEW Dataset

Orange County Year-Over-Year Change in Advanced Manufacturing Salaries



Source: California EDD, QCEW Dataset

Key Advanced Manufacturing Occupation Trends

The most widely held Advanced Manufacturing occupations in Orange County are laborers and material movers, assemblers, and packers; the California EDD predicts that these occupations will also see significant employment growth in the near future. While many of these entry-level positions offer relatively low wages, they also offer hands-on experience and the possibility of career advancement. The next tier of occupations, such as first line supervisors and machinists, require additional training and experience. Machinists' versatile, in-demand skills allow them to command relatively higher wages than other low-skill occupations.

Occupation	Current Employment (2014)	Average Salary (2014)	Est. 2012	Est. Employment 2022	Est. Growth
Laborers and Freight, Stock, and Material Movers	23,110	$25,934	22,070	26,990	22.3%
Team Assemblers	12,930	$28,237	12,650	12,300	-2.8%
Packers and Packagers	9,930	$22,032	9,450	10,660	12.8%
Inspectors, Testers, Sorters, Samplers, and Weighers	6,880	$39,601	7,010	7,290	4.0%
First-Line Supervisors of Production and Operating Workers	6,390	$57,511	6,570	6,640	1.1%
Machinists	6,170	$40,404	5,950	6,880	15.6%
Helpers--Production Workers	5,590	$25,798	5,410	5,830	7.8%
Electrical and Electronic Equipment Assemblers	4,890	$25,950	4,780	4,640	-2.9%
Electromechanical Equipment Assemblers	1,170	$29,365	1,200	1,100	-8.3%
Semiconductor Processors	700	$34,630	760	600	-21.1%

Source: California EDD, OES Dataset

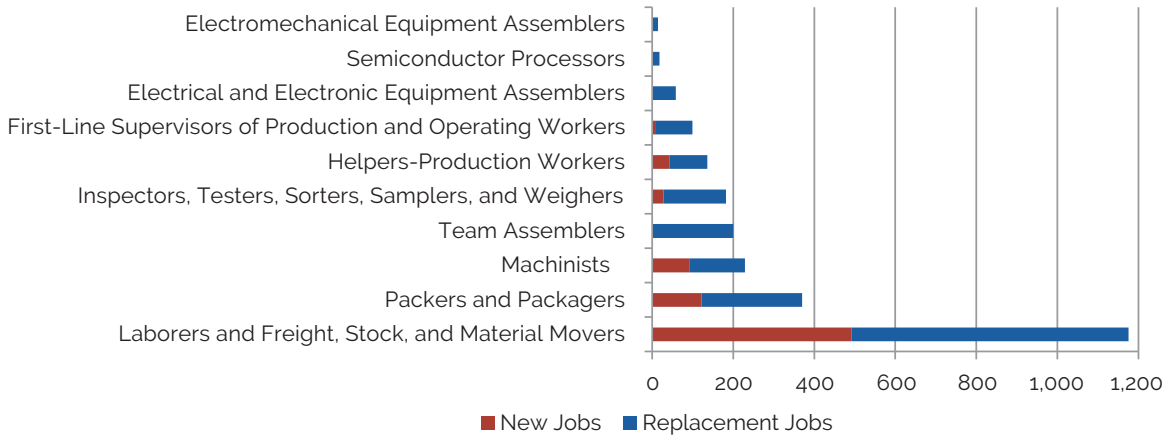
Occupation	Total Jobs	New Jobs	Replacement Needs	Education Level
Laborers and Freight, Stock, and Material Movers	1,176	492	684	Less Than High School
Packers and Packagers	370	122	248	Less Than High School
Machinists	229	93	136	High School Diploma or Equivalent
Team Assemblers	200	0	200	High School Diploma or Equivalent
Inspectors, Testers, Sorters, Samplers, and Weighers	182	28	154	High School Diploma or Equivalent
Helpers-Production Workers	136	43	93	Less Than High School
First-Line Supervisors of Production and Operating Workers	99	7	92	Postsecondary Non-Degree Award
Electrical and Electronic Equipment Assemblers	58	0	58	High School Diploma or Equivalent
Semiconductor Processors	18	0	18	Associate's Degree
Electromechanical Equipment Assemblers	14	0	14	High School Diploma or Equivalent

Source: California EDD, OES Dataset

The table above breaks down Advanced Manufacturing job creation over the next decade. While low-skill, low-wage positions are predicted to experience the highest rate of growth, there is also predicted to be significant demand for machinists and first-line supervisors. Many of these positions require a high school diploma or less, which allows many individuals that struggle through secondary or post-secondary education to find gainful employment.

The Baby Boomer generation will create many job openings as it reaches retirement age; many Advanced Manufacturing jobs created over the next decade will come from replacement needs instead of new positions. Orange County has a shortage of workers qualified to fill these positions, which may become a problem in the near future. Automation poses another challenge as machines will replace many lower-skill workers in this industry. Both of these potential problems demonstrate the importance of education and training in laying a foundation for the future prosperity of this field.

Advanced Manufacturing - Annual Job Creation Projections, 2012-2022



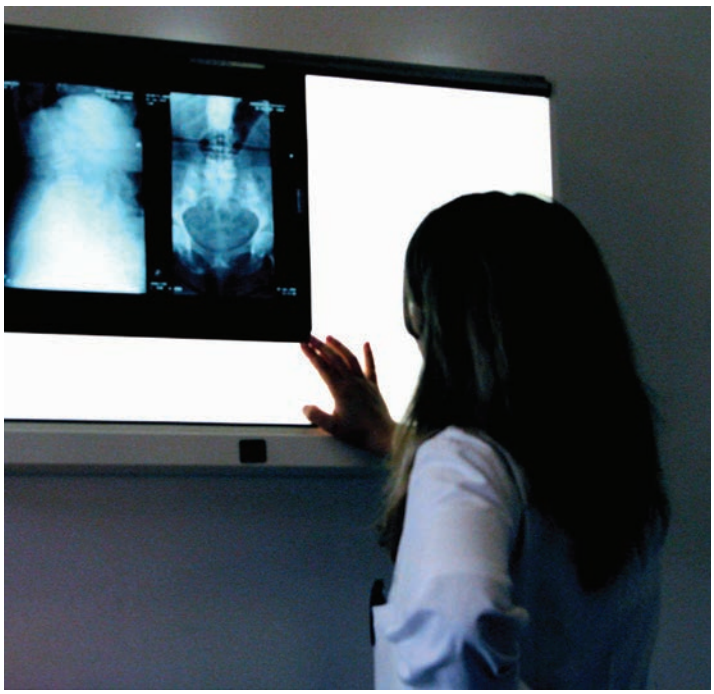
Source: California Employment Development Department

Health Care

The Health Care sector, which has experienced tremendous growth in recent years, has become a primary driver of the county's economy. This sector offers a wide range of occupations, from entry-level positions (Home Health Aides) to positions requiring specialized education training (Registered Nurses) at wages commensurate with the county's high cost of living.

Health Care was one of the few Orange County industries to experience growth during the Great Recession. Industry employment grew from 144,500 in January 2007 to 200,200 in June 2015 — a 38 percent increase. By contrast, overall county civilian employment experienced a decrease of 1.5 percent over the same period. The Health Care industry continues to drive employment growth as the county recovers.

Several factors have contributed to the industry's continued growth, including new technologies and the Affordable Care Act (ACA), which has transformed Health Care into a more consumer-oriented "shopping" experience. A recent Kaiser Permanente report identifies several major Health Care trends, including a focus on at-home and virtual care and the increased use of data analytics.



Key Health Care Industry Trends

While General Medical and Surgical Hospitals have lost 577 jobs since Q4 2013, Individuals and Family Services added 1,338 new positions over the same period.

> ***Health Care was one of the few Orange County industries to experience growth during the Great Recession. Industry employment grew from 144,500 in January 2007 to 200,200 in June 2015 — a 38 percent increase. By contrast, overall county civilian employment experienced a decrease of 1.5 percent over the same period.***

Other major employment gains came from Offices of Other Health Practitioners, which added 977 jobs, and Residential Mental Health Facilities, which added 694 jobs over the same time period. This employment growth most likely stems from the recently-enacted ACA, which resulted in increased consumer Health Care options and thus additional Health Care workers. In addition, the national attention provided by the passage of the ACA may have encouraged jobseekers to gain the necessary credentials for employment in this growing industry.

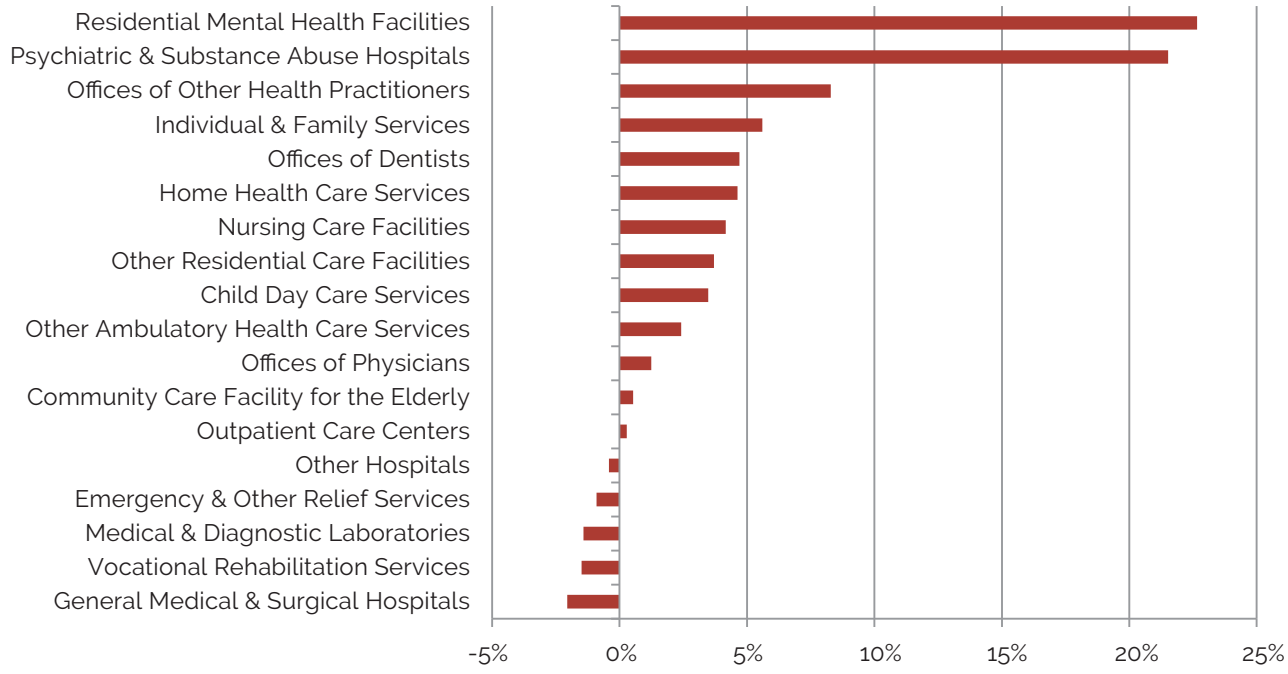
Offices of Physicians make the highest salaries in the Health Care industry. The average salary Q4 2014 was $100,620 — nearly $4,000 higher than in Q4 2013 —which demonstrates significant wage growth. Other Ambulatory Services, however, saw the largest wage growth over the same time period with an average salary increase of $4,784. Psychiatric and Substance Abuse Hospitals also had a significant gain of just over $4,000. Emergency and Other Relief Services, on the other hand, saw average salaries drop by $2,652 or 6.2 percent. Medical and Diagnostic Laboratories experienced the second largest loss at $2,236 or 3.1 percent.

Wages and salaries vary widely in the Health Care sector due to differing educational and training requirements. Offices of Physicians, for example, command high wages due to the sector's high educational requirements, while Child Day Care Services offer much lower wages and barriers to entry. Despite these major differences, in overall wage levels, Orange County must ensure that all Health Care sectors can provide living wages.

Industry Title	Employment		Average Salary	
	Q4 2014	YoY Change	Q4 2014	YoY Change
General Medical and Surgical Hospitals	27,611	(577)	$68,224	$2,392
Offices of Physicians	27,793	342	$100,620	$3,744
Individual and Family Services	25,211	1,338	$19,084	$520
Offices of Dentists	14,103	633	$51,844	$988
Offices of Other Health Practitioners	12,772	977	$43,680	($728)
Nursing Care Facilities	10,643	426	$42,224	$3,536
Community Care Facility for the Elderly	9,092	48	$27,872	$988
Home Health Care Services	6,104	270	$37,024	$1,300
Outpatient Care Centers	6,302	18	$56,316	$260
Child Day Care Services	5,300	178	$26,780	$676
Medical and Diagnostic Laboratories	5,357	(77)	$70,148	($2,236)
Residential Mental Health Facilities	3,756	694	$31,200	$2,028
Other Ambulatory Health Care Services	2,074	49	$38,168	$4,784
Vocational Rehabilitation Services	2,175	(33)	$26,000	$1,872
Other Hospitals	1,453	(6)	$58,500	$1,820
Other Residential Care Facilities	1,121	40	$32,240	$676
Emergency and Other Relief Services	109	(1)	$40,456	($2,652)
Psychiatric & Substance Abuse Hospitals	830	147	$44,252	$4,004

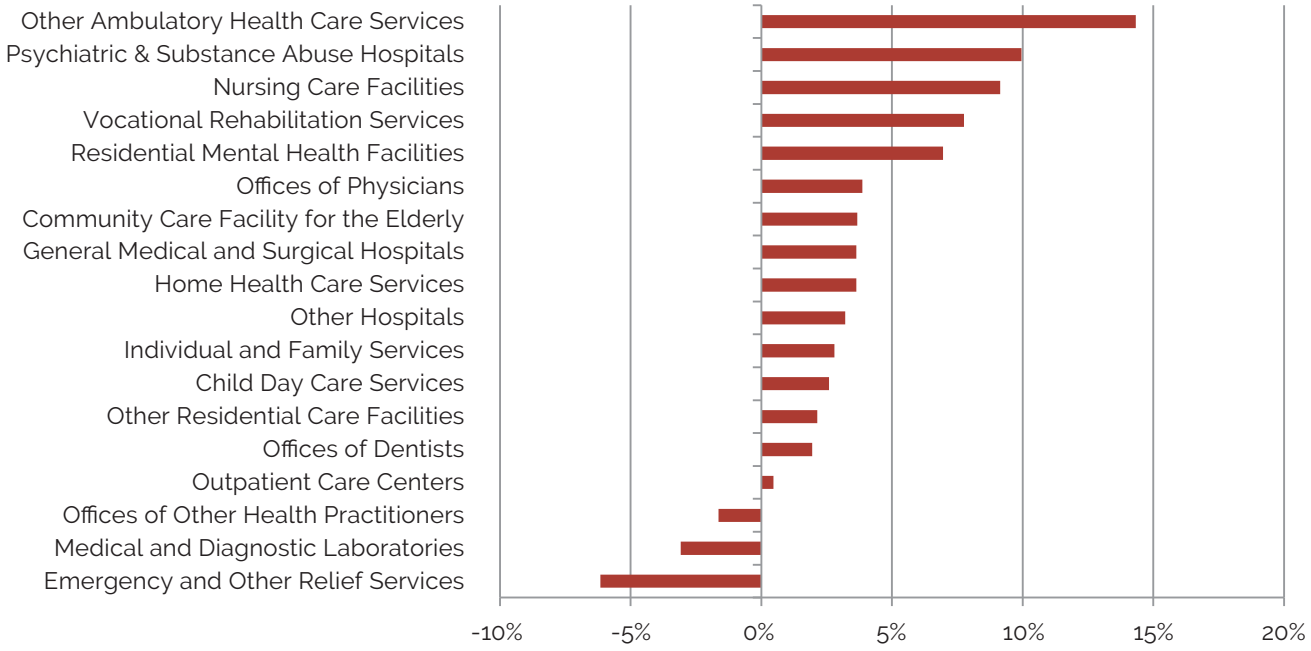
Source: California EDD, QCEW Dataset

Orange County Year -Over -Year Change in Health Care Employment



Source: California EDD, QCEW Dataset

Orange County Year-Over-Year Change in Healthcare Salaries



Source: California EDD, QCEW Dataset

Key Health Care Occupation Trends

Of the highlighted occupations, Registered Nurses, Medical Assistants, and Licensed Vocational Nurses are projected to have the highest absolute employment growth. However, Clinical Laboratory Technicians, Home Health Aides, and Physical Therapists are projected to have the highest percentage growth. While some occupations lost jobs between 2012 and 2014, all industry sectors are projected to grow over the next decade. Orange County must continue to provide the education and training needed to support this growth.

Occupation	Current Employment (2014)	Average Salary (2014)	Estimated Employment 2012	Estimated Employment 2022	Estimated Percent Growth
Registered Nurses	18,510	$87,362	18,610	21,300	14.5%
Medical Assistants	7,700	$35,036	7,560	9,010	19.2%
Licensed Practical & Licensed Vocational Nurses	6,120	$48,866	6,080	7,430	22.2%
Dental Assistants	5,010	$35,439	4,990	5,750	15.2%
Home Health Aides	3,780	$22,692	3,770	5,130	36.1%
Social & Human Service Assistants	2,490	$34,449	2,380	2,940	23.5%
Dental Hygienists	2,240	$91,844	2,240	2,760	23.2%
Physical Therapists	1,960	$95,395	2,010	2,650	31.8%
Medical & Clinical Laboratory Technicians	1,590	$40,175	1,580	2,150	36.1%
Health Technologists & Technicians, Other*	1,260	$47,733	1,260	1,530	21.4%

*Includes Neurodiagnostic Technologists, Radiology Technicians, and Surgical Assistants
Source: California EDD, OES Dataset

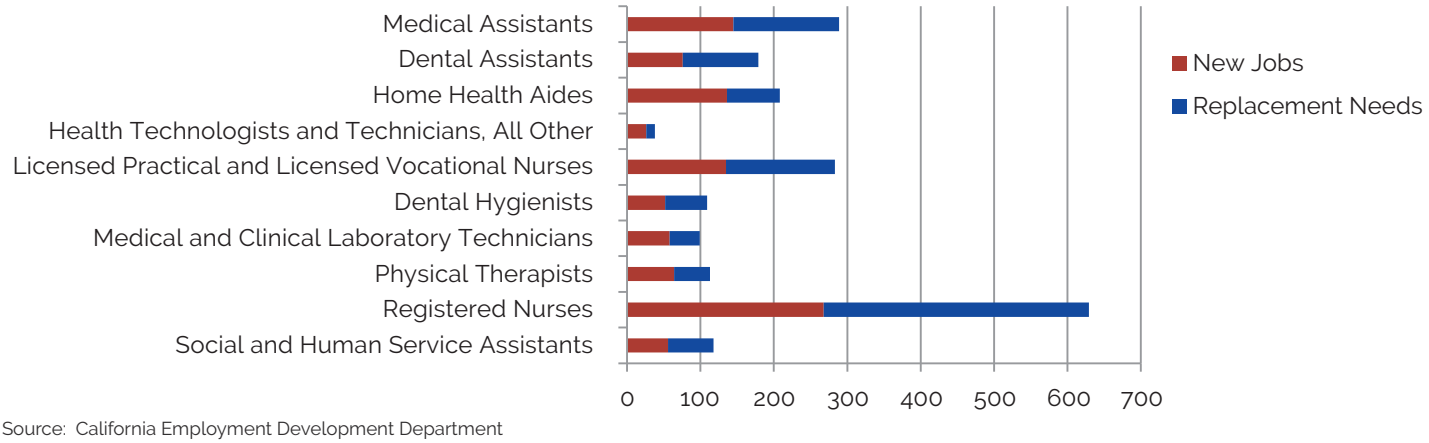
Occupation	Total Jobs	New Jobs	Replacement Needs	Education Level
Registered Nurses	629	268	361	Associate's Degree
Home Health Aides	208	136	72	Less Than High School
Licensed Practical & Licensed Vocational Nurses	283	135	148	Postsecondary Non-Degree Award
Medical Assistants	289	145	144	High School Diploma
Dental Assistants	179	76	103	Postsecondary Non-Degree Award
Social and Human Service Assistants	118	56	62	High School Diploma
Physical Therapists	113	64	49	Doctoral or Professional's Degree
Dental Hygienists	109	52	57	Associate's Degree
Medical & Clinical Laboratory Technicians	99	58	41	Associate's Degree
Health Technologists & Technicians, Other	38	26	12	Postsecondary Non-Degree Award

Source: California EDD, OES Dataset

The table above illustrates future Health Care job creation by sector along with educational requirements, demonstrating the industry's importance to Orange County by providing jobs at all educational levels. Health Care positions with livable wages are available for those who have only just graduated high school as well as for those who have completed post-secondary institutions or very advanced training programs. Physical therapists, the occupation with the highest overall salary among all the occupations presented in this report, require a doctorate or professional degree. Meanwhile, home health aides, one of the lower compensated occupations, requires only a high school diploma. Orange County must give its residents the tools to climb the Health Care career ladder and enjoy high wages and the county's high quality of life.

Registered Nurses are projected to have the highest overall growth and new job creation in the Healthcare industry. Home health aides will also create more new jobs than replacement jobs, reflecting the aging population in Orange County and the nation as a whole. As seen in the graph below, the prevalence of new jobs – as opposed to replacement needs – in Healthcare speaks to the vitality of the industry and its continued importance to Orange County.

Healthcare Annual Job Creation Projections, 2012-2022



Source: California Employment Development Department

Information Technology

Information Technology (IT) continues to evolve at a pace rarely seen in any industry around the world. As the business world becomes more high-tech and interconnected it creates more and more opportunities for businesses that provide products and services that increase efficiency. IT firms divide into "vertical" companies that provide hardware and software, and "horizontal" companies that provide operational IT services. In both cases, the ubiquity of IT in the modern workplace means it cuts across most, if not all, industries.

Orange County's geographical location and strong business community have made it a hub for IT firms. The county's deep talent pool of well-educated, qualified workers with backgrounds in STEM make it attractive to many nationally known technology firms. Many of these workers are homegrown as Orange County boasts excellent STEM- and technology-related education and training. As IT and related fields continue to evolve, Orange County must evolve its education and training programs as well, and maintain the talent pool that provides one of its major competitive advantages in this field.

Orange County has an estimated 2,454 vertical IT firms that employ approximately 30,000 individuals and another 19,590 horizontal IT firms that employ approximately 90,000 people. Despite their 120,000 employees, IT firms in the area report a lack of qualified individuals who possess both broad IT skill sets and business acumen.

> ***"Information technology continues to evolve at a pace rarely seen in any industry around the world."***

Both vertical and horizontal IT employment growth in Orange County is set to surpass the state's overall job growth with vertical IT occupations set to expand by 35.4 percent and horizontal IT occupations set to grow by 19.2 percent. Despite having a lower occupational growth rate, horizontal IT firms typically generate more job openings and opportunities, especially in occupations such as Computer User Support Specialists, which continue to grow at a rapid paces as they support many other growing industries.

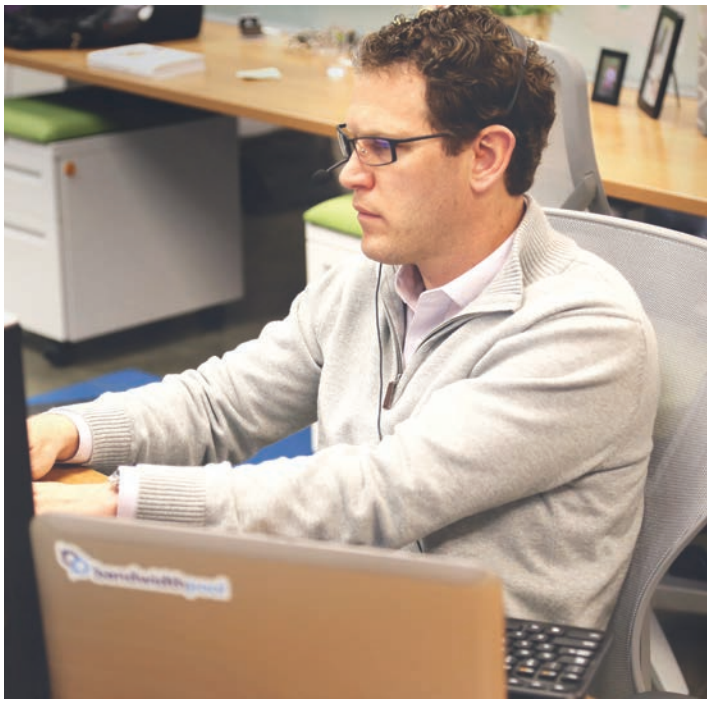
OCWIB Workforce Innovation Fund IT Competitiveness Project

Funded by a three-year $3 million Workforce Innovation Fund grant from the U.S. Department of Labor, the Orange County Information Technology Cluster Competitiveness Project is a partnership between OCBC and the Orange County Workforce Investment Board (OCWIB) that brings together educational leaders and top IT executives for a series of strategic discussions about the future of IT in Orange County. These discussions allowed OCBC to develop a plan to address the needs of IT firms and implement several pilot initiatives, including:

- **Development of a new IT training programs** targeted at the emerging areas of new growth and job creation including mobile applications, business process analytics, cloud computing, IT security, healthcare IT and predictive analytics;

- **Re-structuring of existing IT programs and educational pathways** to concentrate on current and anticipated business needs; and

- **The development of an IT pipeline program** which includes web-based internship portals as well as an initiative which targets veterans to ensure their future employment.



Key IT Industry Trends

Despite climbing IT salaries in the past year, the overall IT industry in Orange County shrunk by 5 percent, or a total of 1,240 jobs, since Q4 2013. Telecommunications, a subset of IT, also experienced a strong drop in employment, decreasing by 676 jobs or 7.9 percent.

The Broadcasting, as well as Motion Picture and Sound Recording industries have lost jobs, reflecting how new technologies, especially on-demand streaming content, have disrupted these industries. Conversely, computer systems design and software publishers, which both provide above average salaries, gained 674 and 142 jobs, respectively.

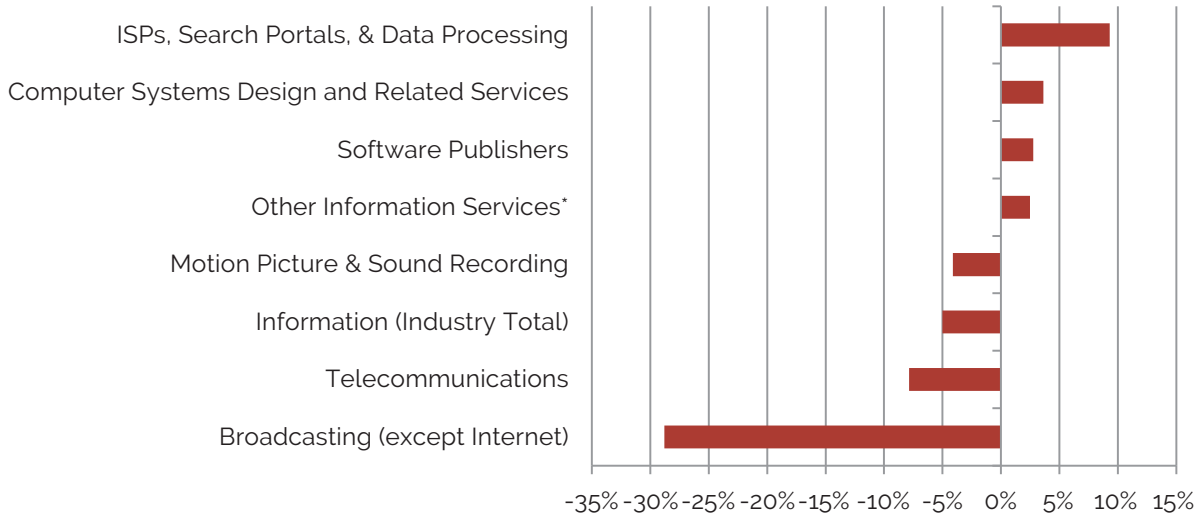
Orange County must recognize the potential negative effects of declines in IT-related industries and implement more programs, such as the Orange County Information Technology Cluster Competitiveness Project, in order to increase interest in these fields and provide a talent pool for county IT firms.

> *Orange County must recognize the potential negative effects of declines in IT-related industries and implement more programs in order to increase interest in these fields.*

Industry Title	Employment		Average Salary	
	Q4 2014	YoY Change	Q4 2014	YoY Change
Information (Industry Total)	23,519	-1,240	$94,900	$7,696
Computer Systems Design and Related Services	19,246	674	$106,028	($3,172)
Telecommunications	7,933	-676	$82,680	$8,372
Software Publishers	5,294	142	$157,248	$6,552
Motion Picture & Sound Recording	2,262	-97	$41,652	$4,212
ISPs, Search Portals, & Data Processing	1,971	168	$83,304	$4,264
Other Information Services*	1,894	46	$94,692	($1,144)
Broadcasting (except Internet)	1,157	-468	$77,584	$5,200

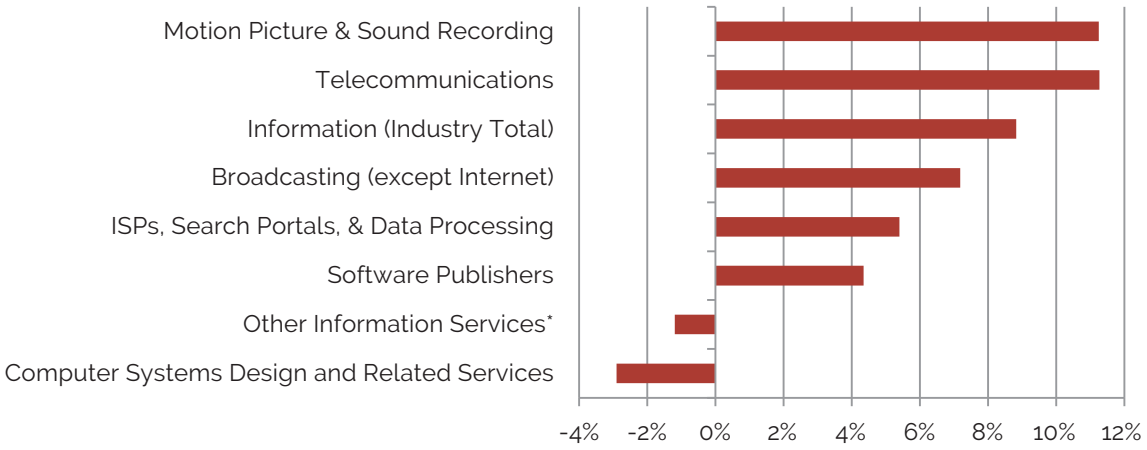
*Includes Libraries, Licensing of Syndicated Media, and Data Archiving. Source: California EDD, QCEW Dataset

Orange County Year-Over-Year Change in Information Technology Employment



Source: California EDD, QCEW Dataset

Orange County Year-Over-Year Change in Information Technology Salaries



Source: California EDD, QCEW Dataset

Key IT Occupation Trends

IT occupations provide both high salaries and employment growth, which is slated to continue over the next decade. Both subsets of software developers, for example, make average wages of over $100,000 and are expected to see 16 percent and 19.1 percent growth, respectively.

Occupation	Current Employment 2014	Average Salary 2014	Estimated Employment 2012	Estimated Employment 2022	Estimated Percent Growth
Software Developers, Applications	9,230	$102,962	8,900	10,320	16.0%
Software Developers, Systems Software	7,200	$112,857	6,900	8,220	19.1%
Computer User Support Specialists	6,480	$58,123	6,330	7,920	25.1%
Computer Programmers	5,200	$83,203	5,060	5,810	14.8%
Computer Systems Analysts	4,960	$91,196	4,970	6,500	30.8%
Network and Computer Systems Administrators	4,540	$85,814	4,340	5,270	21.4%
Computer Network Support Specialists	1,820	$71,346	1,870	1,970	5.3%
Web Developers	1,700	$65,488	2,090	2,840	35.9%
Computer Network Architects	1,540	$107,555	1,430	1,840	28.7%
Database Administrators	1,300	$85,358	1,250	1,570	25.6%
Computer and Information Research Scientists	680	$118,158	710	860	21.1%
Information Security Analysts	480	$92,946	460	660	43.5%

Source: California EDD, OES Dataset

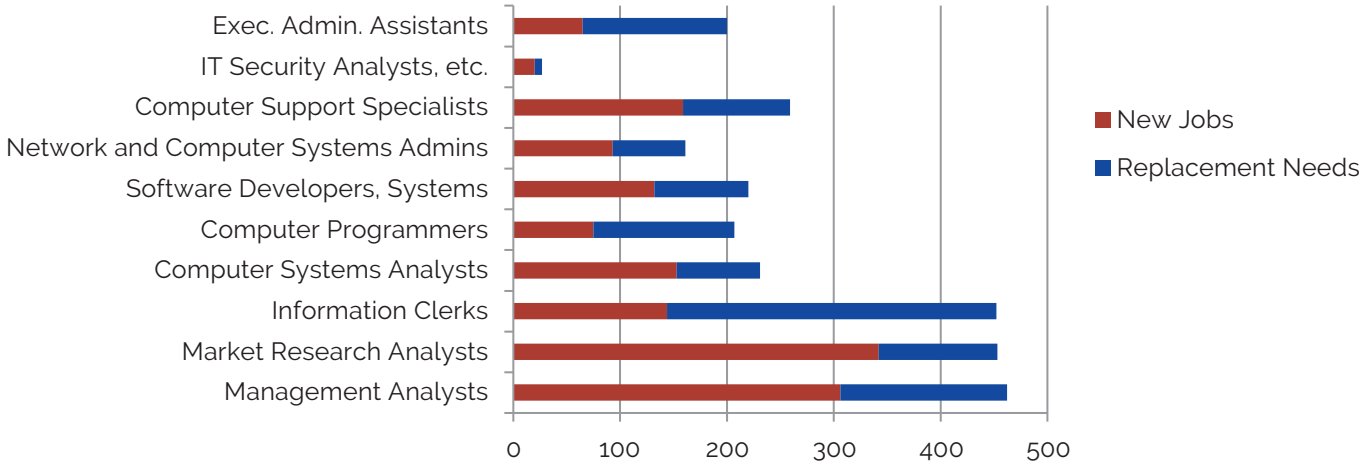
Occupation	Total Jobs	New Jobs	Replacement Needs	Education Level
Computer User Support Specialists	259	159	100	Bachelor's Degree
Software Developers, Applications	256	142	114	Bachelor's Degree
Computer Systems Analysts	231	153	78	Bachelor's Degree
Software Developers, Systems Software	220	132	88	Bachelor's Degree
Computer Programmers	207	75	132	Bachelor's Degree
Network and Computer Systems Administrators	161	93	68	Bachelor's Degree
Web Developers	108	75	33	Bachelor's Degree
Computer Network Architects	63	41	22	Bachelor's Degree
Database Administrators	56	32	24	Bachelor's Degree
Computer Network Support Specialists	39	10	29	Associate's Degree
Information Security Analysts	27	20	7	Bachelor's Degree
Computer and Information Research Scientists	26	15	11	Doctoral or Professional Degree

Source: California EDD, OES Dataset

As illustrated by the table above, the majority of IT occupations require a Bachelor's Degree or higher. The relatively small need for replacement jobs in this industry speaks to its young workforce and room for growth through new job creation. As mentioned before, however, Orange County IT employers have struggled to find the employees who combine IT knowledge and the business acumen needed to sustain this growth. Fortunately, the relative youth of the IT workforce means that employers and county policymakers have time to implement the education and training programs needed to produce well-rounded, in-demand IT workers.

> *IT employers have struggled to find employees with the combined IT knowledge and the business acumen needed to sustain growth.*

Information Technology - Annual Job Creation Projections, 2012 - 2022

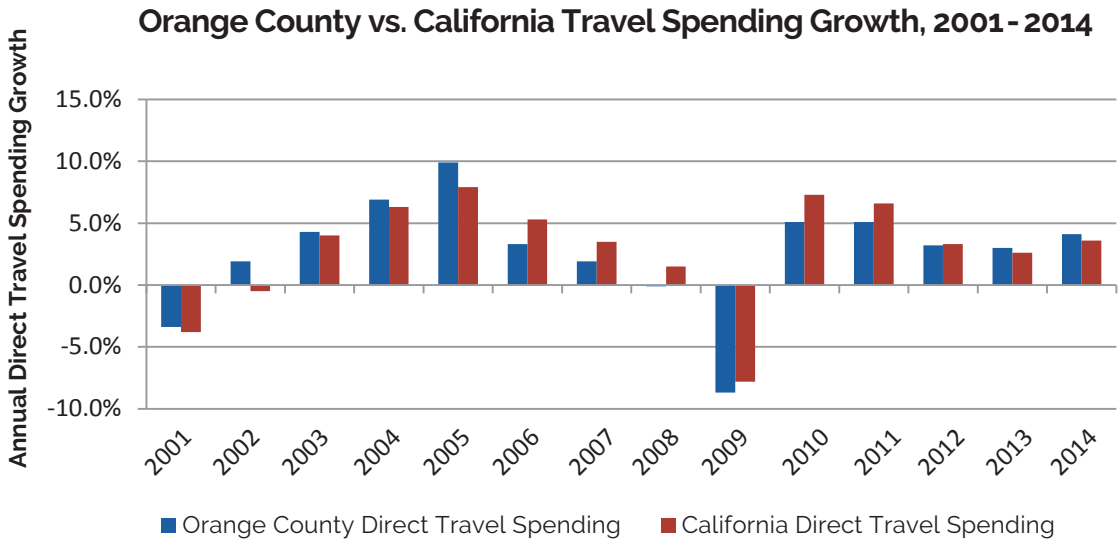


Source: California Employment Development Department

Hospitality and Tourism

The Hospitality and Tourism industries have a long history in Orange County thanks its geographical location along the Pacific Rim, its celebrated coastline and climate, and visionary entrepreneurs such as Walt Disney and Walter Knott. Orange County is a premier national and international vacation destination in 2015, boasting theme parks, beaches, professional sports, museums, convention centers, and shopping centers, as well as well-developed air, land, and sea transportation networks and nodes. The county's central Southern California location between two other large tourist destinations — Los Angeles and San Diego — has allowed it to become a vacation hub; a visitor to Orange County can visit beaches and snow-capped mountains in the same day.

According to the Anaheim/Orange County Visitor and Convention Bureau, tourism reached a 10-year high in 2014 with more than 46.1 million visitors — this is a 4 percent increase over 2013 totals. While domestic visitors (42 million) remained the majority, the number of international visitors increased by 6.4 percent from 2013. Visitor spending in 2014 rebounded to pre-recession levels — reaching $10.8 billion — and continues to grow faster than visitor spending in the state as a whole.



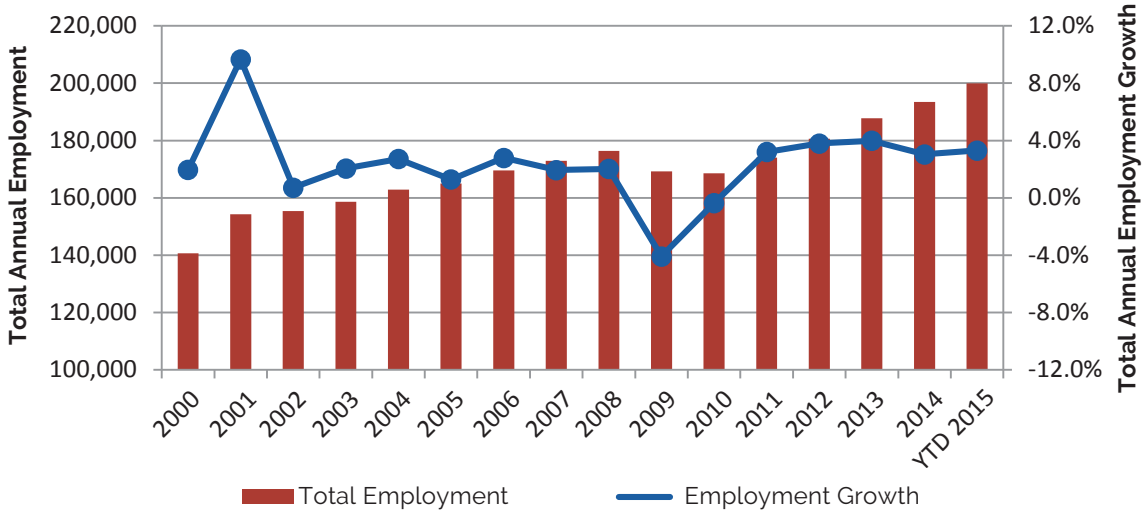
Source: VisitCalifornia.com

Anaheim, home to the Disneyland Resort and the Anaheim Convention Center, saw a 16 percent increase in tourism from 2013 to 2014, with a total of 21 million visitors in 2014. The Anaheim Convention Center recently broken ground on an expansion project, adding another 200,000 square feet of flexible meeting space. This project is estimated to create $9 million in tax revenue while providing 1,860 construction jobs and 2,000 new permanent jobs to the local economy.

According to the California EDD, Orange County's Tourism industry employed almost 200,000 in June, 2015, a 1.8 percent increase since June, 2014. The industry showed consistent growth for decades as county attractions continue to draw domestic and international visitors of all ages. Tourism represents almost 13 percent of total employment, a testament to its importance to the county economy as a whole.

> *Tourism represents almost 13 percent of total county employment, a testament to its importance to the economy as a whole.*

Orange County Leisure & Hospitality Employment Growth, 2000 - YTD 2015



Source: California Employment Development Department

Key Hospitality and Tourism Industry Trends

While the Hotel and Motel sector lost 298 jobs over the past year, the Restaurant sector, which accounts for the majority of Hospitality employment, added more than 3,500 jobs over the same period. The Snack and Nonalcoholic Beverage Bars sector also experienced significant growth, adding 1,145 jobs for a 15 percent increase.

While the Hospitality and Tourism industry provides a significant number of jobs to residents, these jobs are typically low-skill, low-wage positions traditionally filled by young adults or students just starting their professional careers. As a result, the annual wages earned by these workers are, on average, much lower than the overall county average. Tourism workers' lower wages make it imperative that the county provide them with access to education or training that will lead to opportunities for career advancement.

> *While the Hospitality and Tourism industry provides a significant number of jobs to residents, these jobs are typically low-skill, low-wage positions traditionally filled by young adults or students.*

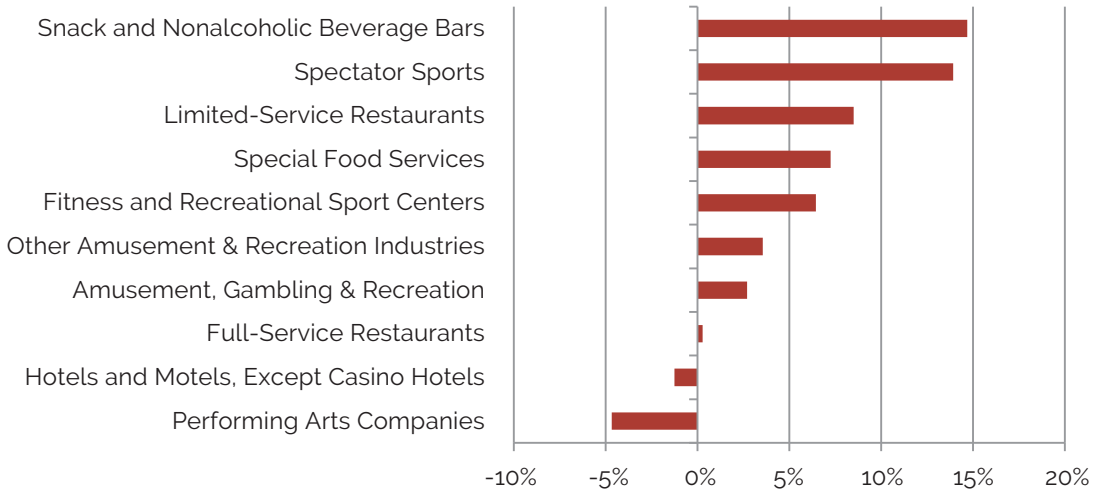
Industry	Employment		Average Salary	
	Q4 2014	YoY Change	Q4 2014	YoY Change
Full-Service Restaurants	63,670	176	$20,956	$1,248
Limited-Service Restaurants	46,238	3,621	$16,380	$1,092
Amusement, Gambling & Recreation	37,315	981	$29,744	$2,808
Hotels and Motels, Except Casino Hotels	23,447	-298	$34,632	$1,976
Other Amusement & Recreation Industries	10,724	368	$23,816	$1,196
Snack and Nonalcoholic Beverage Bars	8,944	1,145	$18,304	$260
Fitness and Recreational Sport Centers	5,373	325	$19,760	$1,716
Special Food Services	3,703	250	$26,416	$468
Spectator Sports	1,604	196	$122,616	$9,568
Performing Arts Companies	1,104	-54	$32,864	-$1,508

Source: California EDD, QCEW Dataset

Limited-Service Restaurants, for example, provided the largest absolute employment growth over the past year, adding 3,621 jobs since Q4 2013, but offered an average salary of only $16,380 — not enough to afford Orange County's high cost of living. While the Spectator Sports subsector — which includes the Anaheim Ducks and Los Angeles Angels of Anaheim — provides high salaries, the majority of jobs in the field are low-paying entry-level positions, as illustrated by the chart below.

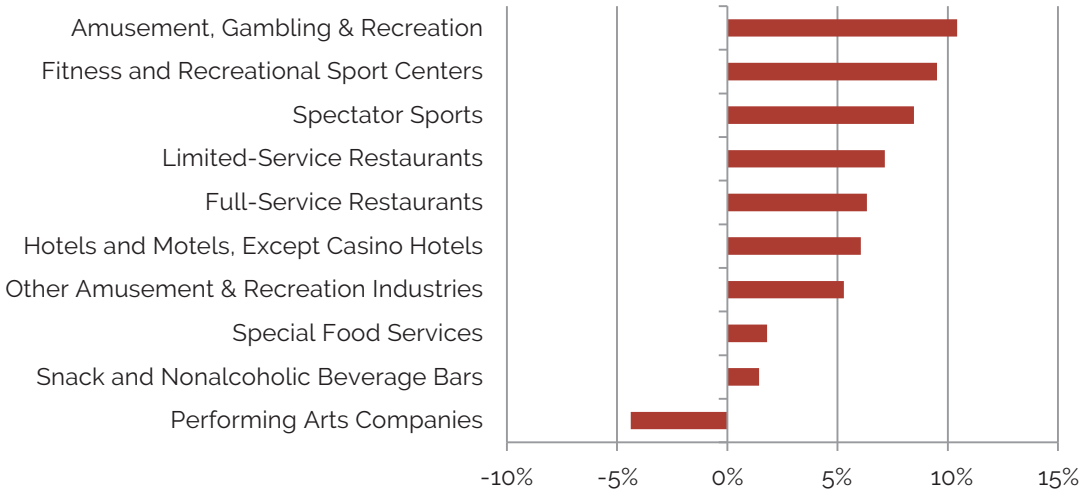
Despite Tourism's strong employment growth, the industry's low wages means that workers are forced to look for more lucrative positions in order to pay student loans and afford a high cost of living. Even with below average wages, Orange County must support this key industry by making Tourism occupations more appealing to qualified jobseekers. Many jobs in this industry serve as the perfect spring board for higher paying jobs in other industries by providing the training and experience needed for workers to achieve upward mobility within the industry; these career pathways will help ensure a steady supply of qualified workers. Entry-level tourism occupations develop valuable transferable skills, such as customer service, which can be stepping-stones to higher paying occupations either in Tourism directly or other clusters.

Orange County Year-Over- Year Change in Hospitality and Tourism Employment



Source: California EDD, QCEW Dataset

Orange County Year-Over-Year Change in Hospitality and Tourism Salaries



Source: California EDD, QCEW Dataset

Key Hospitality and Tourism Occupation Trends

The California EDD projects that Waiters and Waitresses, Receptionists and Information Clerks, Food Preparation Workers, and First-Line Supervisors of Food Preparation and Serving Workers will experience the greatest absolute job growth in the industry. With the exception of Receptionists and Information Clerks and Food Preparation Workers, these occupations are also slated to have enormous percentage growth along with Concierges, which are projected to grow by 27.3 percent from 2012 to 2022. Except for Commercial Pilots, all of these occupations provided average salaries of under $50,000 in 2014, demonstrating both the need for wage and salary increases within this industry and the industry's importance as a provider of entry-level jobs; this becomes increasingly important with rising student loans.

Occupation	Current Employment 2014	Average Salary 2014	Est. Employment 2012	Est. Employment 2022	Est. Percent Growth
Waiters and Waitresses	29,010	$18,964	28,810	34,600	20.1%
Limited-Service Restaurants Receptionists and Information Clerks	12,300	$28,089	11,440	12,890	12.7%
Food Preparation Workers	9,820	$21,735	8,530	9,970	16.9%
First-Line Supervisors of Food Preparation and Serving Workers	8,930	$33,021	8,730	11,180	28.1%
Amusement and Recreation Attendants	7,260	$22,178	6,870	7,930	15.4%
Food Service Managers	3,190	$45,390	4,840	5,650	16.7%
First-Line Supervisors of Personal Service Workers	1,060	$46,221	2,020	2,240	10.9%
Lodging Managers	460	$47,113	720	750	4.2%
Commercial Pilots	370	$82,092	420	430	2.4%
Concierges	350	$29,041	330	420	27.3%
Tour Guides	260	$38,402	170	180	5.9%

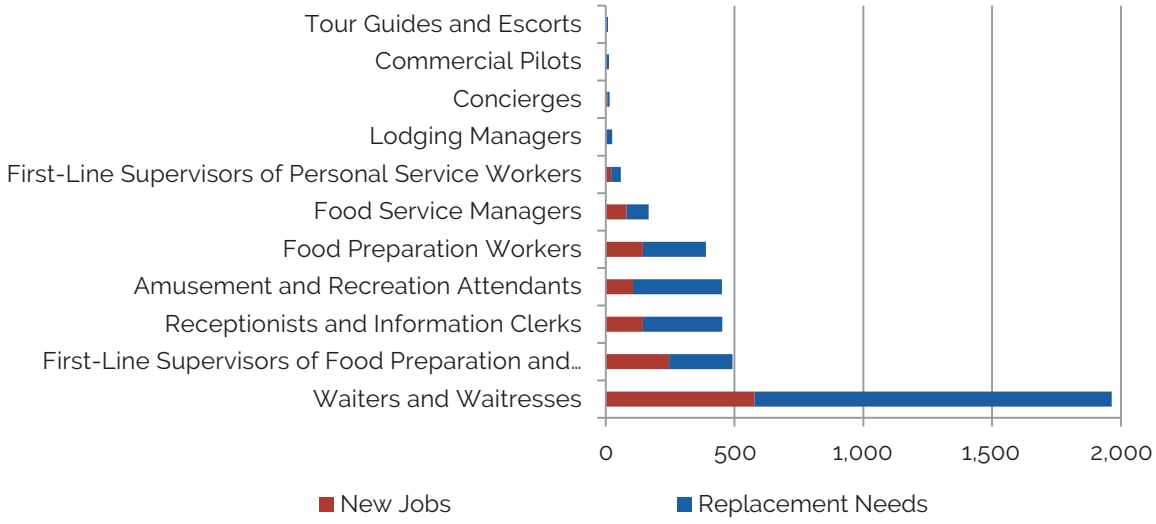
Source: California EDD, QCEW Dataset

The table below highlights each occupation's replacement needs and new job creation alongside educational requirements. All of the chosen occupations require a high-school diploma or less — a low barrier to entry reflected in the industry's generally low wages. The majority of job creation stems from replacement needs. This high turnover illustrates the entry-level and temporary nature of the majority of Tourism jobs. As stated above, career pathways can help workers transition from these entry-level positions into roles that provide higher pay and further opportunities for advancement. Well-supported career pathways will also free up these low-barrier-to-entry positions for the next generation of young workers.

Occupation	Total Jobs	New Jobs	Replacement Needs	Education Level
Waiters and Waitresses	1,964	578	1,386	Less than High School
First-Line Supervisors of Food Preparation and Serving Workers	492	246	246	High School Diploma
Receptionists and Information Clerks	452	144	308	High School Diploma
Amusement and Recreation Attendants	451	106	345	Less than High School
Food Preparation Workers	389	145	244	Less than High School
Food Service Managers	167	81	86	High School Diploma
First-Line Supervisors of Personal Service Workers	59	22	37	High School Diploma
Lodging Managers	25	3	22	High School Diploma
Concierges	16	8	8	High School Diploma
Commercial Pilots	13	1	12	High School Diploma
Tour Guides	9	1	8	High School Diploma

Source: California EDD, OES Dataset

Hospitality and Tourism - Annual Job Creation Projections, 2012 - 2022



Source: California EDD, QCEW Dataset

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
Laura DeSoto, Experian.

CHAIR ELECT
RJ Mayer, The Robert Mayer Corporation

IMMEDIATE PAST CHAIR
Les Card, LSA Associates Inc.

TREASURER
Richard Porras, AT&T

PRESIDENT, CHIEF EXECUTIVE OFFICER AND SECRETARY
Lucetta Dunn, Orange County Business Council

CHAIR, ADVOCACY AND GOVERNMENT AFFAIRS
Lisa Haines, Disneyland Resort

CO-CHAIR, ECONOMIC DEVELOPMENT
Juan Basombrio, Dorsey & Whitney LLP

CO-CHAIR, ECONOMIC DEVELOPMENT
Rick Nogueira, Chase

CHAIR, INFRASTRUCTURE
Maureen Hayes, Parsons

CHAIR, MEMBERSHIP/INVESTOR RELATIONS
RJ Mayer, The Robert Mayer Corporation

CHAIR, CEO LEADERSHIP CAUCUS
Thomas Phelps, Manatt, Phelps & Phillips LLP

CO-CHAIR, LEGAL AFFAIRS
Jon Frank, Snell & Wilmer

CO-CHAIR, LEGAL AFFAIRS
Jeffrey Reeves, Gibson, Dunn & Crutcher LLP

CHAIR, RESEARCH AND COMMUNICATIONS
Steve Churm, Freedom Communications and OC Register

CHAIR, STRATEGIC PLANNING
Les Card, LSA Associates Inc.

CHAIR, WORKFORCE DEVELOPMENT
Richard Porras, AT&T

CHAIR, WORKFORCE HOUSING
Shari Battle, Bank of America

CHAIR, CITY PARTNERS
Dan Miller, The Irvine Company

CHAIRMAN'S CEO LEADERSHIP CAUCUS
Richard Afable, Hoag Memorial Hospital
Joe Brennan, Fluor Enterprises, Inc.
Michael Colglazier, Disneyland Resort
Richard Davis, US Bank
Richard Davis, US Bank
Paul Kaufman, Chase
Parker Kennedy, First American Financial Corporation
Jim Mazzo, AcuFocus
Tom McKernan, Automobile Club of Southern California
Steven Nichols, Rutan & Tucker LLP
Victor Nichols, Experian
Jeffrey Roos, Lennar Homes
Dan Young, Irvine Community Development Company

BOARD OF DIRECTORS
Javier Angulo, Walmart
Juan Basombrio, Dorsey & Whitney LLP
Shari Battle, Bank of America
Robert Bein, RBF Consulting
Charles Bullock, Brandman University
Cathy Capaldi, MemorialCare
Les Card, LSA Associates, Inc.
Steve Churm, OC Register/Freedom Communications
Mark Costa, Kaiser Permanente Orange County
Laura DeSoto, Experian
Lucy Dunn, Orange County Business Council
Jodi Duva, Cox Business Orange Coast
John Erskine, Nossaman LLP
Adrian Foley, Brookfield Residential
Jon Frank, Snell & Wilmer LLP
Lisa Haines, Disneyland Resort
Maureen Hayes, Parsons
Kristy Hennessey, Time Warner Cable
Joe Hensley, U.S. Bank
Michael Hornak, Rutan & Tucker LLP
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
Lori Lyons-Williams, Allergan Inc.
Noel Massie, UPS
RJ Mayer, The Mayer Corporation
Al Mijares, OC Department of Education
Dan Miller, The Irvine Company
Rob Myers, Wells Fargo
Robbin Narike Preciado, Union Bank
Francisco Nebot, SchoolsFirst Federal Credit Union
Steven Nichols, Rutan & Tucker LLP
Rick Nogueira, Chase
Kevin Payne, Southern California Edison
Christopher Peters, HNTB Corporation
Thomas Phelps, Manatt, Phelps & Phillips LLP
Richard Porras, AT&T
Anil Puri, Ph.D., California State University, Fullerton
Jeffrey Reeves, Gibson, Dunn & Crutcher LLP
Nina Robinson, Hoag Memorial Hospital Presbyterian
Glenn Roquemore, PhD, Irvine Valley College
MIchael Schrader, CalOptima
Rodger Schwecke, Southern California Gas Company
Mark Simons, Toshiba America Information Systems Inc.
Frank Talarico Jr., Goodwill of Orange County
Anthony Williams, The Boeing Corporation

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

Peter Agarwal, Citizens Business Bank
Bob Bunyan, The Arlington Group
Dr. Tod Burnett, Saddleback College
Rob Claudio, California Employment Development Department
Janelle Cranch, Orange County Labor Federation
Ronald DiLuigi, St. Joseph Health System
Fred Flores, Diverse Staffing Solutions
Lauray Holland Leis, The Irvine Company
Kenneth Howe, Brookside Builder Services
Alireza Jazayeri, 3P Consulting
June Kuehn, State Department of Rehabilitation
Kevin Landry, New Horizons Computer Learning Centers of Southern California
Jamie Latiano, Renovate America
John Luker, Orangewood Children's Foundation
Doug Mangione, International Brotherhood of Electrical Workers
Barbara Mason, The Boeing Company
Gary Matkin, University of California - Irvine
Ernesto Medrano, Los Angeles/Orange County Building & Construction Trades Council
Robin Murbach, Republic Services
Julio Perez, OC Labor Federation
Tom Porter, Kawasaki Motors Corp., USA
J. Adalberto Quijada, U.S. Small Business Administration
Rachel Ramirez, Performance Excellence Partner, Inc.
Clarence (Buddy) Ray, Community Action Partnership of Orange County
Michael Ruane, National Community Renaissance
Paula Starr, Southern California Indian Center
Tod Sword, Southern California Edison
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
Ruby Yap, Yap & Little, Inc.

Acknowlegements

DATA SOURCES

- Anaheim/Orange County Visitor Center & Convention Bureau
- 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 Employment Development Department, QCEW Dataset
- California Employment Development Department, OES Dataset
- California State University, Fullerton
- California State University, Fullerton; Center for Demographic Research
- California State University, Fullerton; Institute for Economic and Environmental Studies
- Chapman University
- Chapman University, A. Gary Anderson Center for Economic Research
- DataQuick
- Deloitte Consulting
- 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
- The Manufacturing Institute
- U.S. Bureau of Labor Statistics
- U.S. Bureau of Labor Statistics, Employment Situation of Veterans
- U.S. Bureau of Labor Statistics, Occupation 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
- Urban Explorer, Inc and Work2Future: EconoVue
- University of California, Irvine
- University of Southern California, School of Social Work
- VisitCalifornia.com

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 2015 PROJECT TEAM

Dr. Wallace Walrod, Chief Economic Advisor, Orange County Business Council
Alicia Berhow, Vice President, Workforce Development and Advocacy
Delaine Moore, Director of Communications, Orange County Business Council
Patty Conover, Communications and Marketing Manager, Orange County Business Council
James Lyons, Graphic Design Associate, Orange County Business Council
Ben Palmer, Economic Research Assistant, Orange County Business Council
Robert Walrod, Economic Research Assistant, Orange County Business Council
Joseph King, Economic Research Assistant, Orange County Business Council
Danielle Vesia, Economic Research Assistant, Orange County Business Council
Sabrina Solanki, Economic Research Assistant, Orange County Business Council

ORANGE COUNTY BUSINESS COUNCIL

Orange County Workforce Investment Board
Linking Business & People

THANK YOU SPONSORS

Presenting Sponsor

UnionBank®

Gold Sponsor

BOEING

CHASE

Chevron

SDGE®

Southern California Gas Company®

Sempra Energy® utilities

Silver Sponsor

AT&T
California State University, Fullerton
Southern California Edison
Wells Fargo