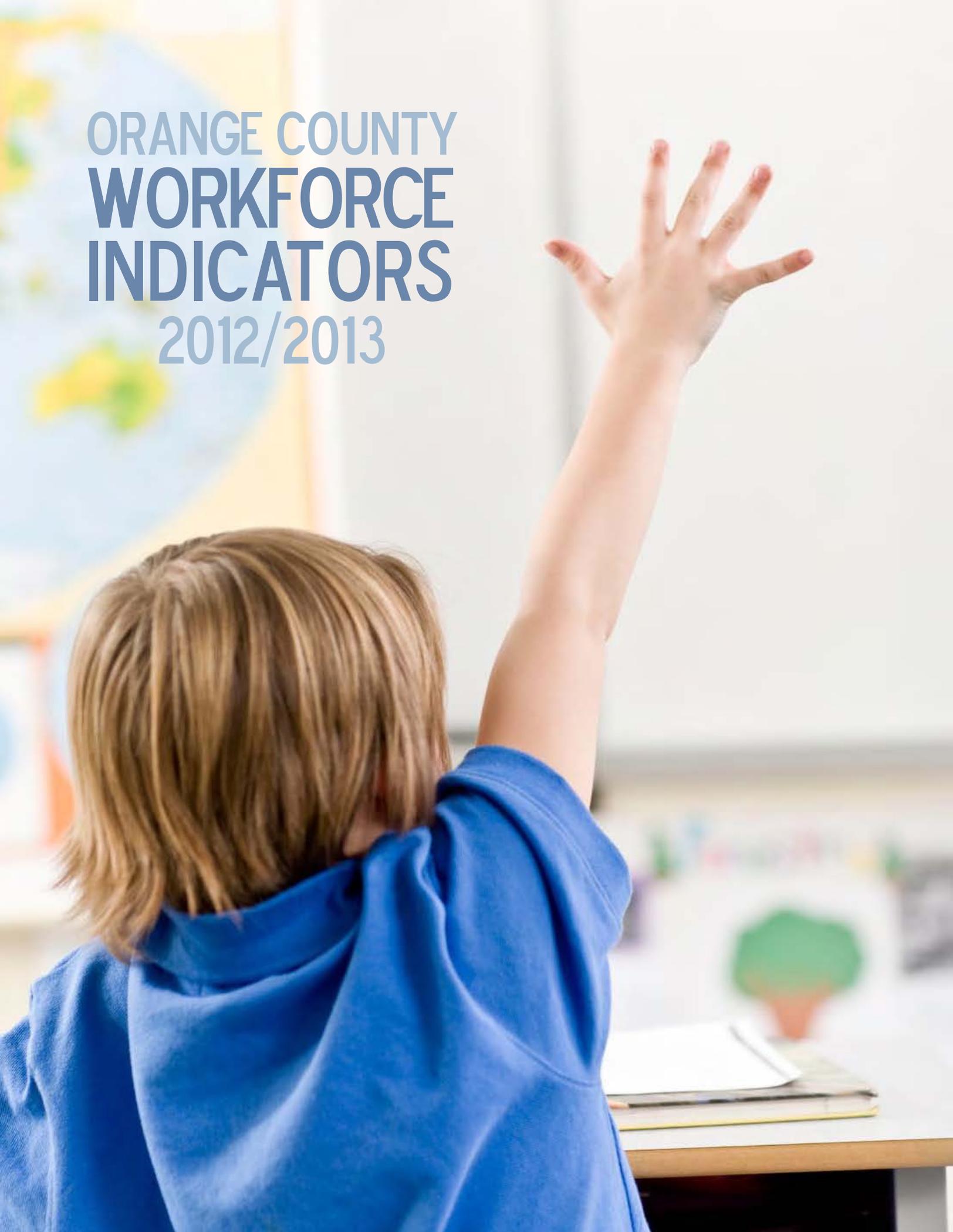


ORANGE COUNTY  
**WORKFORCE  
INDICATORS**  
2012/2013





# TABLE OF CONTENTS

<b>Welcome</b> .....	<b>4</b>
<b>Introduction</b> .....	<b>9</b>
<b>Orange County Demographic Trends</b> .....	<b>13</b>
Age .....	14
Population Growth.....	15
Ethnic Composition .....	16
Workforce Housing Supply .....	18
Household Income and Wages .....	20
<b>Lasting Impacts of the Great Recession</b> .....	<b>23</b>
Job Loss and Unemployment .....	24
Projected Lack of New Job Openings .....	26
Background .....	27
Business Sentiment .....	29
<b>Cross Cutting Cluster Drivers and Emerging Industries</b> .....	<b>31</b>
International Trade .....	34
Information Technology.....	36
Creativity .....	37
Green/Cleantech .....	37
<b>Industry Cluster and Occupation Trends</b> .....	<b>39</b>
Unemployment .....	40
Industry and Occupational Growth .....	41
Cluster Employment and Salaries .....	46
<b>Education and Workforce Training Trends</b> .....	<b>49</b>
API, SAT, and High School Exit Exam Performance .....	52
English Learners .....	57
Dropout Rates .....	59
High-Tech Related Degrees .....	60
<b>Workforce Housing</b> .....	<b>63</b>
Home Ownership.....	64
Renting in Orange County.....	65
<b>Report Partners</b> .....	<b>67</b>
Orange County Business Council Board of Directors .....	68
Orange County Workforce Investment Board .....	69
Acknowledgements .....	70



Dear Workforce Development Partner:

Orange County Business Council (OCBC) and the Orange County Workforce Investment Board (OCWIB) are pleased to announce the eleventh annual *Orange County Workforce: State of the County 2012-2013 Report*. This report highlights the fundamental accomplishments achieved by Orange County's business community and the education and workforce training system, as well as the challenges Orange County must address to develop a skilled workforce for the future.

Last year's report examined Orange County's efforts creating jobs in a jobless economy. In this 2012 report, Dr. Wallace Walrod focuses on the challenges Orange County has leading a burgeoning economic recovery while the state and nation grapple with slow job growth and a global economy decelerates. This year, the Workforce Development Committee examined several broad based issues, including how to connect with Millennials in the workplace and keep them engaged, harness their talent and keep them in a job for more than the average three to five years. How can businesses support the arts to keep students—their eventual employees—engaged and motivated to search for solutions to complex problems? Transitional Kindergarten and its mission for three and four year olds to develop the proper reading and comprehension skills they need to enter kindergarten and succeed through 12th grade. Orange County continues to deal with its set of challenges common to diverse ethnicities, including English language acquisition and fluency, a significant achievement gap between school districts, and a Community College system eager to restructure itself to prepare students while maintaining local control. Finally, how does Orange County deal with the immense amount of graduating college students that need additional skills for today's job market?

The theme of this year's conference is "Education and Workforce Realities in a 21st Century Global Economy." Orange County continues to be the place to live, play and work. Orange County already has developed a great education and workforce training system foundation and continues to work hard on identifying steps to success through:

- Advocating education reform;
- Promoting local control; and
- Supporting game-changing legislation to ensure success in a county noted for innovation and growth.

OCBC and the OCWIB have built a strong and enduring alliance to seek out creative workforce solutions, educational success and the best in workforce training. We hope you will gain new understanding of critical workforce development issues and the spirit of collaboration and partnership from this conference. We encourage you to utilize its materials as a resource and blueprint for future success in your business, educational institutions, and local government.

Sincerely,



Lucy Dunn  
President and CEO  
Orange County Business Council



Bob Bunyan  
2012 Chair  
Orange County Workforce Investment Board



Richard Porras  
Regional Vice President  
External Affairs  
Orange/Riverside &  
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October 9, 2012

On behalf of AT&T, it is a pleasure to welcome you to the 11th annual Workforce Development Conference.

Southern California continues to be the place for employers and workers when it comes to innovation, technology, health care and lifesciences. It has so much to offer in terms of lifestyle, weather and opportunity. Traditional economic development, a functioning infrastructure, adequate workforce housing, and continued workforce development are all essential in sustaining our way of life here in Orange County.

This year's theme, "Education and Workforce Realities in a 21st Century Global Economy," focuses on the challenges businesses and educators face as we strive to attract the best and the brightest in our rapidly changing world. This is no small feat as the times alter how we do business and how our children learn. We must learn to adapt so we can build an educated workforce for the future. Obstacles include adjusting to the changing work habits of the Millennial generation; maintaining arts programs in schools to keep students engaged and to promote creativity; enrolling 3 and 4 year olds in comprehensive preschool programs so they will be able to develop adequate English reading and writing skills; teaching immigrant parents how the education system works in California; and finally, partnering with higher education institutions to identify the training skill sets needed to make certain our businesses thrive and our economy endures.

As key partners, Orange County Business Council (OCBC) and AT&T will continue to work together in promoting the S.T.E.A.M. disciplines (Science, Technology, Engineering, Arts and Math), Latino Educational Attainment, and preparing our young people for the global economy. Business and educators working together to shrink the Achievement Gap will continue to inspire self-assurance, open the world to new ideas, and sustain our economic engine in the county. It makes living and working in Orange County worth it.

Sincerely,

A handwritten signature in black ink that reads "Richard Porras".

Richard Porras  
Assistant Vice President of External Affairs  
AT&T  
2012 OCBC Chair, Workforce Development Committee



**JOHN M. W. MOORLACH, C.P.A.**  
CHAIRMAN, ORANGE COUNTY BOARD OF SUPERVISORS  
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EXECUTIVE ASSISTANT

## **2012-13 ORANGE COUNTY WORKFORCE REPORT**

October 9, 2012

On behalf of the Orange County Board of Supervisors, I am pleased to announce this year's Orange County Workforce Indicators Report, now in its 11th year, and welcome you to the Workforce Development Conference.

The partnership between the Orange County Workforce Investment Board and the Orange County Business Council has provided us with a steady, reliable source of data on workforce, education, and economic trends, as well as other important decision-making tools for our community.

The Workforce Indicators Report is well beyond a collection of lucidly presented data; it is a mirror of our ever-growing community, a lamp that reveals our strengths, and a magnifying glass of both our challenges and opportunities. In leveraging the Orange County Comprehensive Economic Development Strategy (CEDS), we strive to provide educational institutions, businesses, and other organizations a multi-faceted tool to analyze, assess, and plan for success.

We hope all of our partners find inspiration as well as information in these pages to help you in your invaluable work to sustain and improve the beauty and strength of every community, every neighborhood, and every family in Orange County.

The Board congratulates the Orange County Workforce Investment Board and the Orange County Business Council on the 2012-13 Workforce Indicators Report.

Very truly yours,

A handwritten signature in black ink, appearing to read "John M. Moorlach".

John M.W. Moorlach  
Chairman, Board of Supervisors



A stack of several books with colorful covers (orange, green, red, blue, yellow) and white pages, viewed from a low angle. The top book is orange and its cover is visible in the upper half of the image. The other books are stacked below it, showing their spines and pages. The background is a solid blue color.

# INTRODUCTION

2012/2013

# INTRODUCTION

Economic trends have permanently shifted in the last decade. Orange County is responding by establishing an innovative and effective foundation for future job growth and long-term prosperity.

The Great Recession caused devastating job losses and economic hardship to the national and global economy. While many regions and industry segments are still struggling to recover, Orange County has been better able to survive the recession than surrounding counties (and the state overall) because of its diverse economy, competitive business environment, skilled workforce as well as job growth in emerging industries. Orange County's recovery strengthened in 2012 and is once again the economic engine driving Southern California forward.

## COMPETING SUCCESSFULLY BY KEEPING UP WITH SHIFTING TRENDS

In order to adapt and become more competitive, the private sector has become "lean and mean." Orange County businesses are no exceptions to these shifting trends. Orange County's education and workforce systems are also adapting to remain competitive and relevant. Many jobs lost in the county will not be returning, yet emerging industries such as high-tech/information technology and those associated with international trade are providing much-needed economic growth and job creation. To remain on the pathway to recovery, it is more important than ever that Orange County be diligent in keeping up with, and even ahead of, constantly shifting economic trends, as well as capitalizing on its unique, innovative culture. While the state as a whole struggles to recover, Orange County remains an attractive place for businesses to thrive due to its innovative spirit, high quality of life, skilled workforce and attractive geographic location.

## INNOVATION LEADS TO JOB CREATION AND WAGE GROWTH

While the Great Recession put forth substantial challenges for Orange County to overcome, it also created a variety of new opportunities and pathways for increasing economic activity and employment. This year's report identifies the most significant opportunities for economic growth and job creation, while highlighting the challenges Orange County currently faces that will require creative solutions. Understanding the dynamics of the economic changes brought on by the recession will be crucial in ensuring Orange County's future economic viability.

Orange County has never lacked the building blocks for innovation:

- Home to a large number of innovative high-tech industries;
- Leadership in new, emerging industries such as advanced transportation, alternative fuels, medical devices and computer gaming;
- A creative, problem-solving, IT-savvy workforce exemplified by Disney's Imagineers; and
- Large concentrations of research and higher education institutes, business incubators and venture capital investments.

These attributes have provided Orange County with the tools necessary to successfully adapt to shifting demographic and economic landscapes. Yet, as demographics and industries within the county evolve, it is crucial that Orange County not lose its innovative and competitive edge. Continuing to develop policies and mechanisms to adapt to shifting trends rests largely on how well Orange County elected officials, the business community and policymakers collaborate.

One good example is a recent U.S. Department of Labor Workforce Innovation Fund grant awarded to the County of Orange for an Information Technology Cluster Competitiveness Project, a three-year partnership between the business community and the education and workforce training system which will implement a new approach for engaging business and education stakeholders in an intensive planning process concerning the education and training needs of companies in IT across Orange County. The project will:

- Increase the availability of a large pool of skilled IT workers in Orange County;
- Increase the capacity of Orange County's workforce system to support a wide range of IT business needs;
- Place new and returning Orange County workers into IT positions;
- Upgrade the IT skills of incumbent workers already in the Orange County IT industry; and
- Prepare a greater number of high school students for entry-level IT jobs or advanced IT training.

More information about this exciting project will be shared in the next 12 months and coming years.

In order to better understand and appreciate the economic and workforce foundations on which Orange County currently stands, the *2012-2013 Orange County Workforce Indicators Report* provides an overview of the trends that will shape the future of the county. Orange County Business Council and Orange County Workforce Investment Board are pleased to once again work together to promote Orange County's key competitive advantages, while engaging, supporting, and linking groups of workforce, education and business leaders to ensure a strong economic future for Orange County.

**FAST FACT**

*Orange County's education and workforce systems are **adapting to remain competitive and relevant**. To remain on the pathway to recovery, it is more important than ever that Orange County be diligent in keeping up with, and even ahead of, constantly shifting economic trends, as well as **capitalizing on its unique, innovative culture**.*







# ORANGE COUNTY DEMOGRAPHIC TRENDS

2012/2013

# ORANGE COUNTY DEMOGRAPHIC TRENDS

Orange County continues to have an aging and ethnically diverse population. Local and regional leaders play an essential role in planning for the county's shifting population trends that will be critical for Orange County's long-term economic success and prosperity.

## WHY IS THIS AN ISSUE?

Education and workforce training programs must be implemented to support a population that is growing older and becoming more diverse. Older populations require a broad range of healthcare services, housing options, and support programs to sustain a satisfactory quality of life. A diverse community and workforce may need English language proficiency programs and initiatives to increase educational attainment across all levels (K-12, community college, university) in order to build a well-educated, high wage workforce.

## DEMOGRAPHIC SNAPSHOT: ORANGE COUNTY 2011

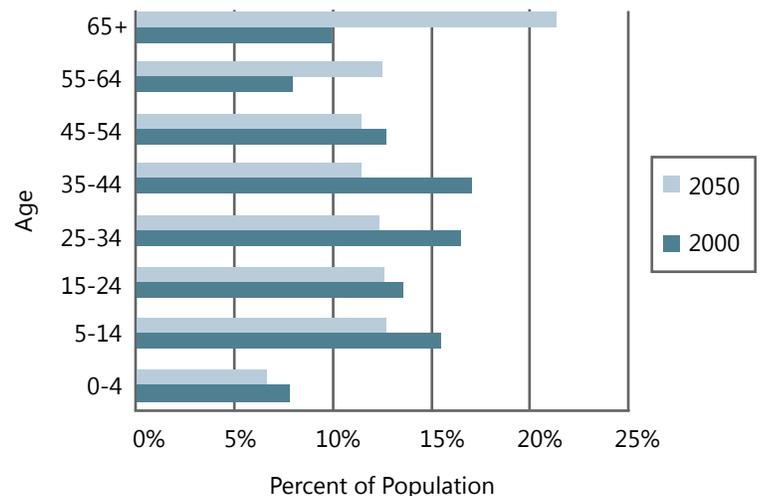
Age	Number	Percent
< 5	193,153	6.3%
5-9	199,403	6.5%
10-14	210,106	6.9%
15-19	220,818	7.2%
20-24	223,182	7.3%
25-29	217,937	7.1%
30-34	203,831	6.7%
35-39	207,345	6.8%
40-44	229,617	7.5%
45-49	228,886	7.5%
50-54	219,531	7.2%
55-59	183,700	6.0%
60-64	154,484	5.1%
65-69	112,426	3.7%
70-74	83,737	2.7%
75-79	64,259	2.1%
80-84	50,775	1.7%
85+	52,555	1.7%
<b>Total</b>	<b>3,055,745</b>	<b>100%</b>

Race	Number	Percent
White	1,330,314	43.5%
Hispanic or Latino	1,042,752	34.1%
African American	47,486	1.6%
American Indian	6,613	0.2%
Asian	549,227	18.0%
Native Hawaiian	8,766	0.3%
Two or more races	70,587	2.3%

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

**AGE >>** As of 2010, Orange County had a population of 3,010,232 (U.S. Census Bureau, 2010 Census) with a median age of 36.2 years old. Around 27.6 percent of the population is under the age of 19 years old, 61 percent is aged between 20-64, and the population 65 years of age and older represents 11.6 percent of the total. Compared to state and national age compositions, Orange County has a slightly larger proportion of residents aged 25-64 and a smaller proportion of residents aged nine and under. These age trends are mainly due to natural increase. In the next several decades the 55+ population is expected to rapidly grow, while the younger population will decline as a proportion of the county population.

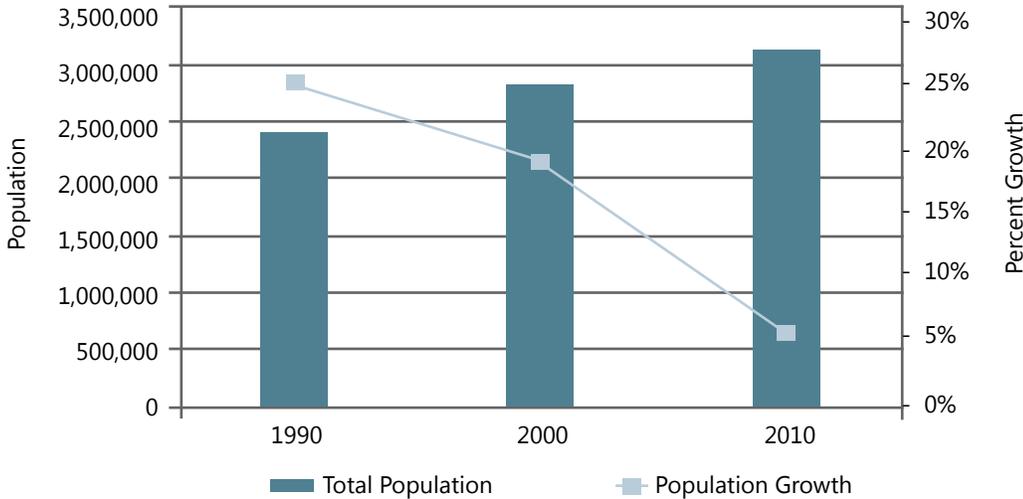
## Projected Components of Population by Age in Orange County, 2000-2050



Source: State of California, Department of Finance

**POPULATION GROWTH >>** From 1990 to 2010, the population increased by approximately 600,000 residents, with the majority of that growth happening in the 1990s (17 percent). Since 1950, the county exceeded state and national growth rates, but the population from 2000-2010 grew at a surprisingly slower rate (just above five percent). In the past two years, the California Department of Finance estimated an additional 45,560 residents, making the current population total 3,055,792 with a growth rate just over 1.5 percent (which is faster than the state growth rate of just over 1.1 percent).

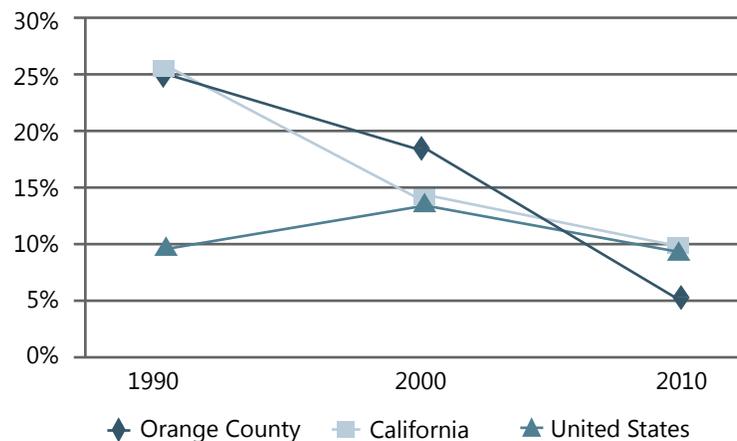
**Orange County Population Growth Trends, 1990-2010**



Source: US Census Bureau, 2010 Census

In the past, especially from 1950-1980, the population in Orange County grew as result of migration from other states and other California counties. This trend has been steadily decreasing and natural increase has become the main source of population growth. According to the California Department of Finance, the net migration (the total of domestic migration and foreign immigration) from 2000 to 2010 accounted for a population loss of 106,369 residents in Orange County. There continues to be a high rate of foreign immigration into the county, accounting for 151,002 in population growth during the same time period. As a result the population growth experienced in the 2000s was due to natural increase (299,661 residents), or about 29,966 children born annually. Population growth due to natural increase, however, has begun to slow, particularly in 2008 when the number of births dropped almost 14 percent. This drop in birth rate is a trend often seen during recessions and depressions. Thus, as Orange County continues toward economic recovery, this number will return to previous levels. In 2011, Orange County saw a relative spike in population growth for the first time since 2001, which was primarily the result of a positive net migration.

**Orange County, California and US Population Growth Comparison**



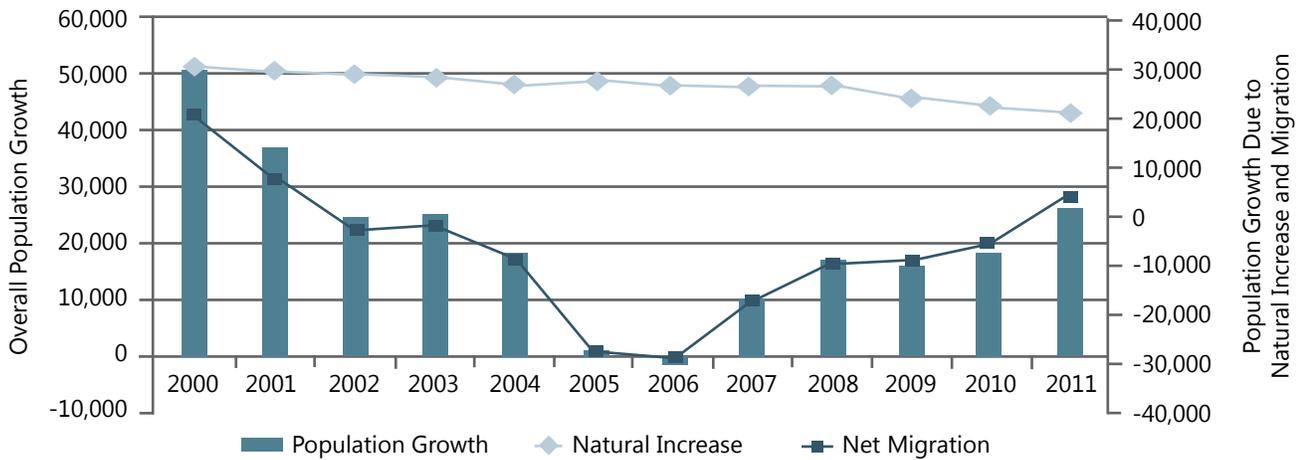
Source: US Census Bureau, 2010 Census

**FAST FACT** | *Over the course of the next several decades, **the 55+ population is expected to rapidly grow**, while the younger population will decline as a proportion of the county population.*

---

**3,055,745**  
Orange County Population

### Orange County Population Growth, 2000-2011



Source: California Department of Finance, Demographic Research Unit

In 2010, the three largest cities in the county were Anaheim (336,265), Santa Ana (324,528) and Irvine (212,375). In the past two decades, Aliso Viejo (450.8 percent), Rancho Santa Margarita (229.1 percent) and Irvine (84.1 percent) experienced the highest population growth.

### Orange County Population Projections

Year	Population
2015	3,156,580
2020	3,266,107
2025	3,349,157
2030	3,410,773
2035	3,421,228

Source: Center for Demographic Research, CSUF

**FAST FACT**

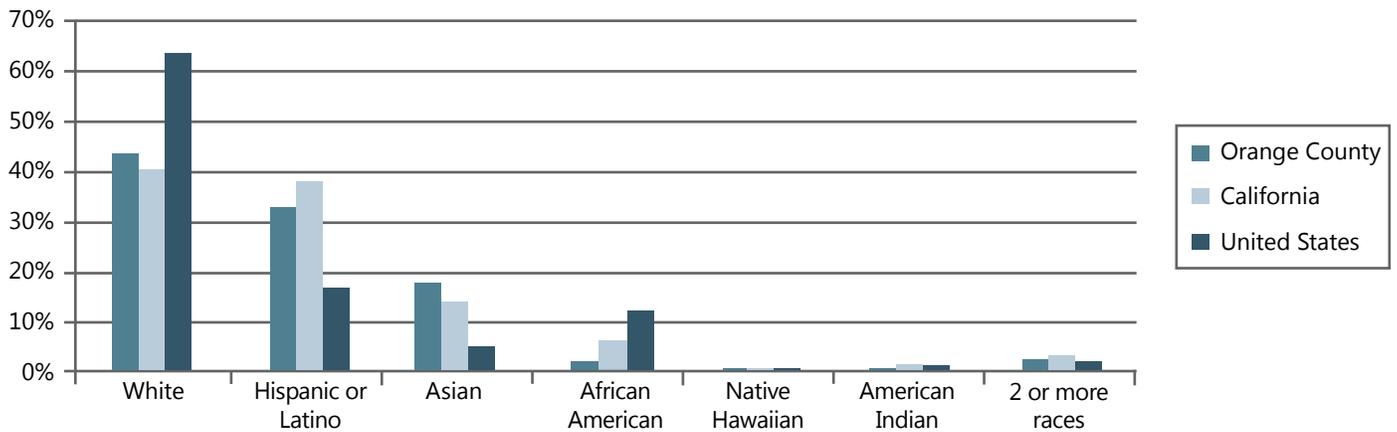
**OC's Most Populous Cities:**

Anaheim	336,265
Santa Ana	324,528
Irvine	212,375

The current growth rate is expected to increase over the next few years, at which point the California State University, Fullerton Center for Demographic Research projects that Orange County will add more than 250,000 residents by 2035.

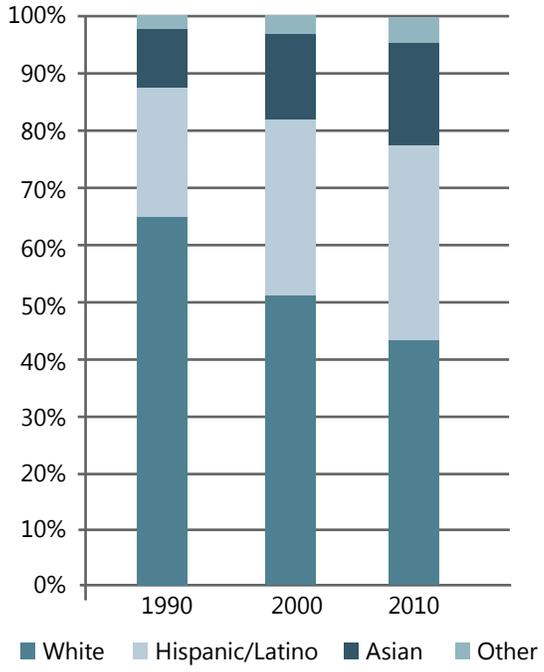
**ETHNIC COMPOSITION** >> Projections indicate that the trends of a diversifying population will continue in Orange County. By 2020, Latinos are projected to replace Whites as the majority. Since 2005, Latinos have accounted for more than 50 percent of the total births in the county, followed by Asians at 25 percent. The growth rate of the Asian population, while smaller in total numbers, outpaces the Latino growth rate. From 1990-2010, Orange County's Asian population increased by 115.8 percent, while Latinos increased by 79.3 percent.

### Orange County, California and United States Ethnic Composition, 2011



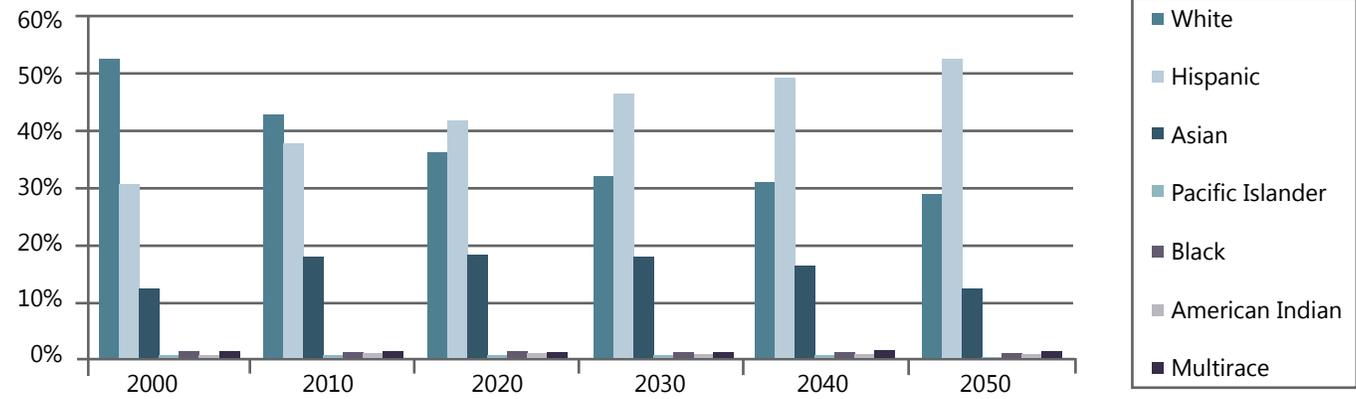
Source: U.S. Census Bureau: State and County Quick Facts

### Orange County Ethnic Composition, 1990-2010



Source: U.S. Census Bureau, 2010 Census

### Projected Components of Population by Ethnicity in Orange County, 2000-2050



Source: State of California, Department of Finance

# WORKFORCE HOUSING SUPPLY

During a difficult decade of early peaks and subsequent valleys for the housing market, Orange County's long-term trend of a constrained housing unit supply continues. Many residents struggle with high housing costs in today's economy.

## WHY IS THIS AN ISSUE?

A region's housing supply needs to keep pace with long-term population and job growth. Even during the Great Recession, Orange County was a net importer of workers from all surrounding Southern California counties.

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

The California Department of Finance estimates that between 2010 and 2012 Orange County added 3,454 new housing units, bringing the total housing unit count to 1,052,361. The estimated housing growth rate of slightly over 0.3 percent is far behind the estimated population growth rate of 1.5 percent during the same time period. This trend could create a potential shortage in the housing supply, especially with the increased population growth projected over the coming years, particularly with Orange County's already constrained housing market.

In 2010, Orange County had a total of 1,048,907 housing units—94.6 percent of which were occupied, leaving 5.4 percent vacant. This compares to 91.9 percent occupied and 8.1 percent vacant for California and 88.6 percent occupied and 11.4 percent vacant for the nation.

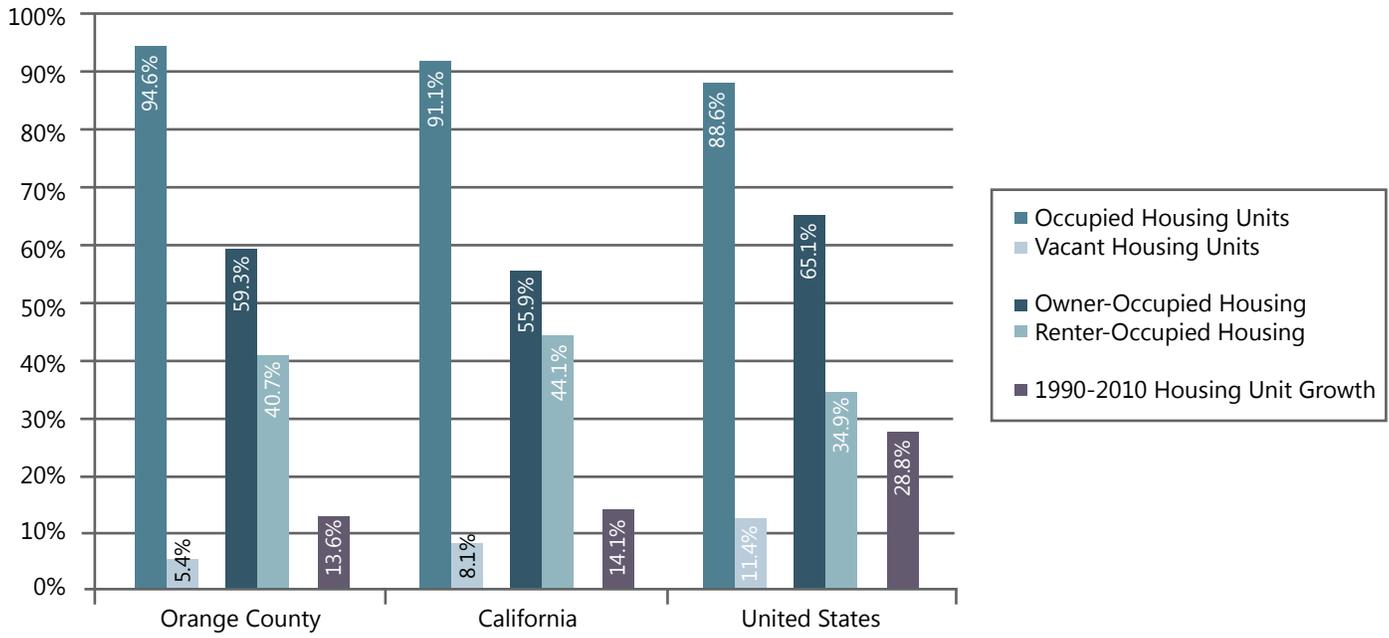


Of Orange County's total occupied housing units, 59.3 percent are owner-occupied and 40.7 percent are renter-occupied. The owner-occupied rate in the county is higher than the state (55.9 percent) but lower than the nation (65.1 percent). In the 1990s, the rate of owner-occupied housing units grew before stagnating in the 2000s. On the other hand, renter-occupied housing units dipped in the 1990s, but grew approximately three percent in the 2000s.

### FAST FACT

*The three cities that experienced the largest population growth also experienced the highest housing growth. Housing units in **Aliso Viejo increased by 320%** between 1990 and 2010, followed by **Rancho Santa Margarita growing by 173.4%**, and **Irvine by 87%**.*

### Orange County, California and United States Housing Tenure Overview, 2010



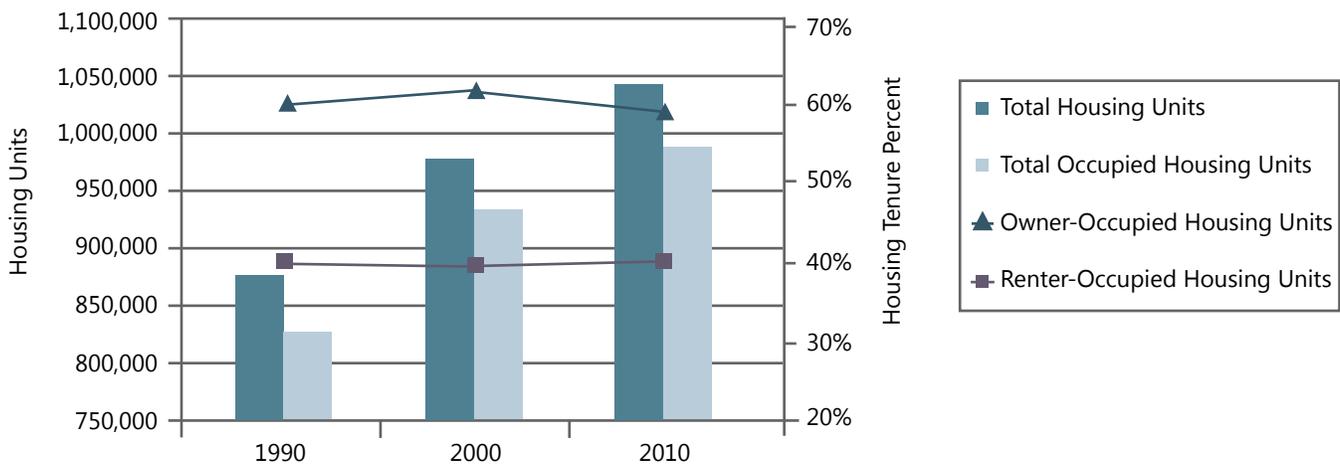
Source: U.S. Census Bureau, 2010 Census

Overall, the total number of housing units in the county grew by 13.6 percent from 1990 to 2010, comparable to state growth of 14.1 percent but far below national growth of 28.8 percent. The three cities that experienced the largest population growth also subsequently experienced the highest housing growth. Housing units in Aliso Viejo increased by 320 percent between 1990 and 2010, followed by Rancho Santa Margarita growing by 173.4 percent, and Irvine by 87 percent.

Projections suggest that future housing growth in the county will be centered near transportation resources in cities such as Anaheim, Irvine and Santa Ana. These cities will also experience population and employment growth. These estimated growth trends suggest that housing options will need to change to reflect higher densities, meaning that construction of multi-unit housing options—such as apartments or condos—in high growth clusters will need to increase in order to accommodate growing populations.

Please see the **Workforce Housing** section of the report for more information on housing.

### Orange County Housing Growth and Tenure, 1990-2010



Source: U.S. Census Bureau, 2010 Census

# HOUSEHOLD INCOME AND WAGES

As the Orange County economy recovers from the Great Recession, economic development and workforce programs should target opportunities to grow good paying jobs, increase wage levels, and expedite employment growth. At a time of slow job growth and income stagnation at the state and national levels, continued focus on a comprehensive economic development strategy and the creation of a more skilled workforce are essential to maintaining Orange County's positive income trends.

## WHY IS THIS AN ISSUE?

Keeping Orange County's median household income growing is crucial to maintaining and growing a vibrant and prosperous economy. While the state projects that low wage occupations will be the primary drivers of the region's employment growth in the next 10 years, Orange County's high-tech, biotech and emerging clusters show promise in creating significant employment growth of high wage occupations.

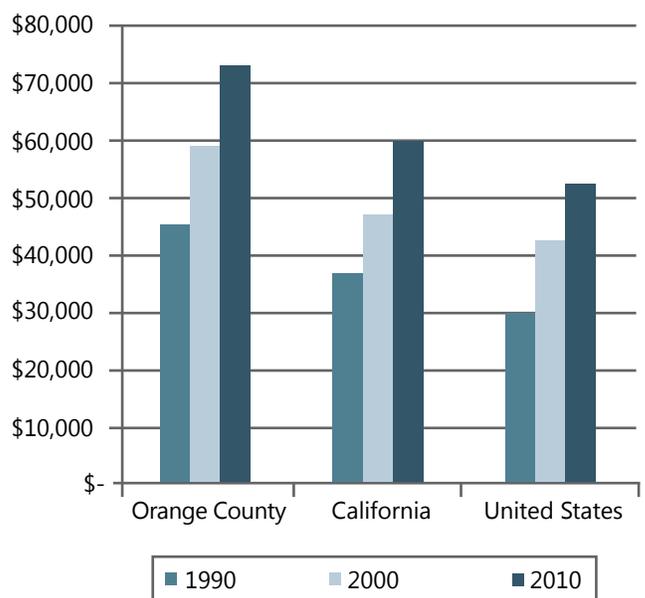
## HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Sustained income and wage growth has allowed Orange County to become the economic engine for Southern California, while maintaining an unparalleled quality of life. Positive income trends are a by-product of the county's business climate, concentration of large, successful employers, high-growth, innovative companies, and well-educated workforce.

The 2010 median household income was \$73,380, which was 22.9 percent higher than the state (\$59,659) and 41 percent higher than the nation (\$52,041)—a trend that goes back several decades. Overall between 1990 and 2010, Orange County median household incomes were 24.9 percent larger than state averages and 44.5 percent larger than national averages.

The past two decades have brought significant changes to Orange County's profile of income categories. In 1990, approximately 30 percent of the residents had incomes below \$30,000; 25 percent between \$30,000-\$49,000; and 23 percent between \$50,000-\$74,999. Higher income categories—those making between \$75,000-\$124,999 and over \$125,000—were about 17 percent and 6 percent respectively.

**Orange County, California and United States  
Median Household Income Comparison, 1990-2010**

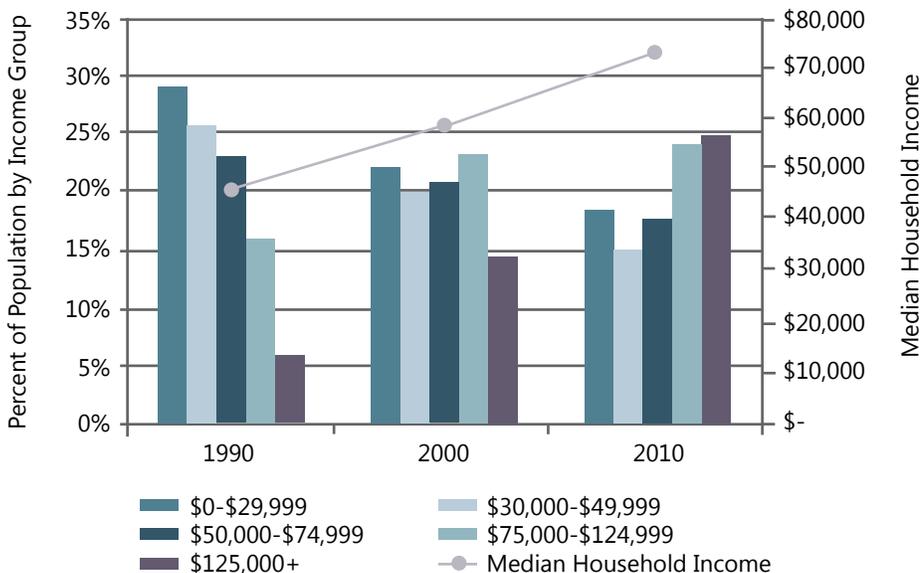


Source: U.S. Census Bureau, Bureau of Economic Analysis

By 2000, the proportion of Orange County workers making under \$75,000 shrank to 63 percent, while the two largest income categories grew to 37 percent. The largest growth occurred in the income group making over \$125,000 (nine percent), while the largest decrease occurred in the below \$30,000 income category (seven percent).

These trends continued in the last decade, with the proportion of lower income groups in Orange County shrinking further and the top two income categories growing steadily. Overall, in 2010 the two highest income groups represented nearly 50 percent of households, a testament to the beneficial impact of an economic and business environment focused on creating high wage occupations.

### Evolution of Orange County Income Groups, 1990-2010



Source: U.S. Census Bureau, Bureau of Economic Analysis

#### FAST FACT

By 2000, the proportion of Orange County workers making under \$75,000 shrank to 63%, while **the two largest income categories grew to 37%**. These trends continued in the last decade, with the proportion of **lower income groups shrinking** further and the **top two income categories growing** steadily.







**LASTING IMPACTS** OF THE  
**GREAT RECESSION**

**2012/2013**

# LASTING IMPACTS OF THE GREAT RECESSION

While Orange County's recovery continues to take hold, replacing permanently lost jobs and creating new job opportunities will require innovative job creation strategies and new ways of thinking about education and workforce initiatives. Education, workforce and economic development strategies must all be put under the microscope to identify the most efficient pathways and plans of action for expanding Orange County's economic growth and job creation.

## WHY IS THIS AN ISSUE?

Many economists originally estimated a quick economic recovery, similar to recoveries experienced in past recessions. However, most economists truly underestimated the deep and lasting effects of the Great Recession on employment and housing markets. Spending habits of businesses and consumers have been slow to improve. Many societal and business trends—such as traditional hiring and staffing patterns—have permanently shifted. There is a growing realization that a significant portion of the jobs that were lost will not return. As a result, traditional pathways of economic and employment growth will not be as effective. Thus, new ways of thinking are required to understand and prepare for the future.

While Orange County's job profile revealed some possibilities of improvement during the first half of 2012, its unemployment rate remains historically high. There are too many potential workers who are unemployed, underemployed, or have stopped looking for work. A continued lack of available job opportunities also suggests a rather subdued economic growth outlook. In order to remain competitive in this challenging environment, companies must maintain "lean and mean" profiles created in response to the Great Recession, with the focus on operational efficiency and cost-savings rather than overall expansion and growth of business prospects.

The economic climate has forced some older workers into early retirement while many more have chosen to work longer than expected due to declines in their financial situation. One direct result is far fewer job openings for the younger workforce, which raises labor market competition in an already strained job market.

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

**JOB LOSS AND UNEMPLOYMENT** >> Orange County lost around 162,000 jobs, or 10.7 percent of its payroll employment, from 2007 to 2010. The construction industry experienced the largest percentage decline (28.6 percent), which translated to a total of 29,467 lost jobs. Significant employment loss was experienced by other industries: Business and professional services (-34,314 jobs); trade, transportation and utilities (-27,050 jobs); manufacturing (-25,867 jobs); and financial services (-22,025 jobs).

Many expected 2012 to be a year of continuing recovery for the overall job market, but these expectations were not fully realized. Orange County employment grew by approximately 35,000 private sector jobs in the first half of 2012, but unemployment rates remained high, fluctuating between 7.4 percent and 8.2 percent—an improvement from the 8.5 percent to 9.2 percent unemployment rates during the same period last year. During the month of June 2012, the county had a net increase of 8,700 jobs, yet unemployment rose due to an increased labor force of recent graduates and more unemployed actively looking for work. Thus, while Orange County continues to generate good job growth, an increasing labor force lacks enough job opportunities to bring down the unemployment rate significantly. Chapman University estimates payroll job growth to grow by 1.8 percent in 2012 and 2.0 percent in 2013. If these rates are not accelerated, employment rates may not level for several years.

In April 2012, California State University, Fullerton projected that employment will increase by 1.5 percent in 2012 and 2.1 percent in 2013 for Orange County, which translates to a gain of 20,500 jobs in 2012 and 29,500 jobs in 2013—increases that follow the 14,375 jobs added in 2011.

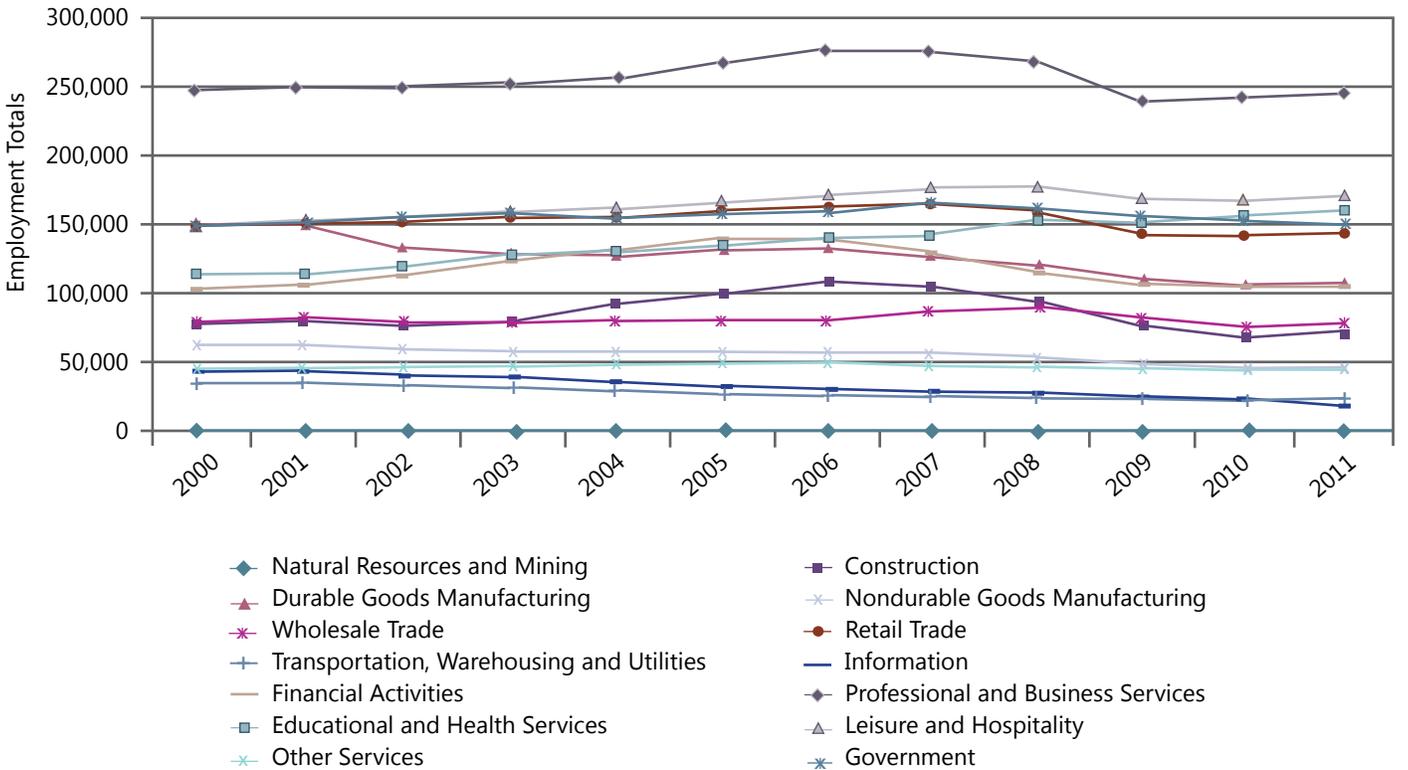
A month-to-month trends analysis from January 2007 to June 2012 shows the recessionary drops in industry employment and the subsequent lag in employment recovery. While most industries show significant employment declines during the recession and subdued growth coming out of the downturn, two industries—health services and tourism (leisure and hospitality)—performed comparatively well during both periods. The two sectors with the biggest declines during the Great Recession—construction and financial services—have also recently experienced job growth.

On the state level, a more struggling economic profile takes shape. Compared to prior recessions, California’s recovery so far is extremely slow. In the 1990-1991 recession that saw severe defense downsizing and aerospace cutbacks, California lost 517,000 payroll jobs and unemployment rates hit 9.9 percent, yet recovery to peak levels came within 21 months. In the 2001 recession caused by the bursting of the dotcom bubble, California lost 365,000 jobs yet took 28 months to recover. The recent 2007-2009 recession cost the state 1,366,000 jobs over 38 months. Currently there is a high level of uncertainty as to the extent and timing of employment recovery.

As of June 2012, Chapman University estimates that statewide payroll jobs will increase by 1.4 percent in 2012 and 1.6 percent in 2013, adding 202,000 jobs in 2012 and 223,000 jobs in 2013. These projected increases in job growth will continue on the heels of the 0.6 percent growth in 2011. While payroll job growth is showing signs of recovery, the low rate of growth casts doubt about California’s ability to regain peak employment levels anytime in the near future.

Although, for Orange County, job growth in the first half of 2012 surpassed projection rates. Even with this steady stream of improvements in the job market, the unemployment rate will likely remain persistently above seven percent through 2013 as the county attempts to recover from the 150,000+ jobs lost during the Great Recession.

**Orange County Industry Trends, 2000-2011**



Source: California Employment Development Department

**PROJECTED LACK OF NEW JOB OPENINGS** >> California's Employment Development Department (EDD) estimates of new and replacement jobs through 2018 underscore the severity of the issue of Baby Boomers currently constraining the jobs which would traditionally fall to those just entering the workforce. New jobs are classified as openings due only to new additional job growth. Replacement jobs are defined as job openings created when workers retire or permanently leave an occupation. Actual future replacement jobs may not be as available as predicted because older generations are pushing their retirement back.



Replacement jobs are largely concentrated in lower wage entry-level jobs in the following industries: office and administrative support; sales and related occupations; and food preparation and serving related occupations. These industries have median annual wages of \$35,922, \$30,659 and \$19,406 respectively.

There is a trend of Baby Boomers occupying traditionally younger workforce starter jobs and using them as survival jobs. A possible explanation for this could arise from the way these jobs typically do not require extremely high levels of education but are rather built around experience. Baby Boomers, having been in the workforce longer than younger generations, are likely more qualified for these positions, if not overqualified. This older workforce cannot afford to start the long process of finding other high wage jobs because of increased competition and lack of availability.

As a result, young graduates may be unable to enter the workforce in meaningful ways or at the time they desire. Some continue advancing their education but this strategy does not securely prepare them for the economic future ahead. Even with the potential for higher eventual salaries, many students take out large student loans and accrue debt for years after graduation. Prolonged uncertainty about current and future job market trends will continue to hamper the employment and career prospects of this generation.

**FAST FACT**

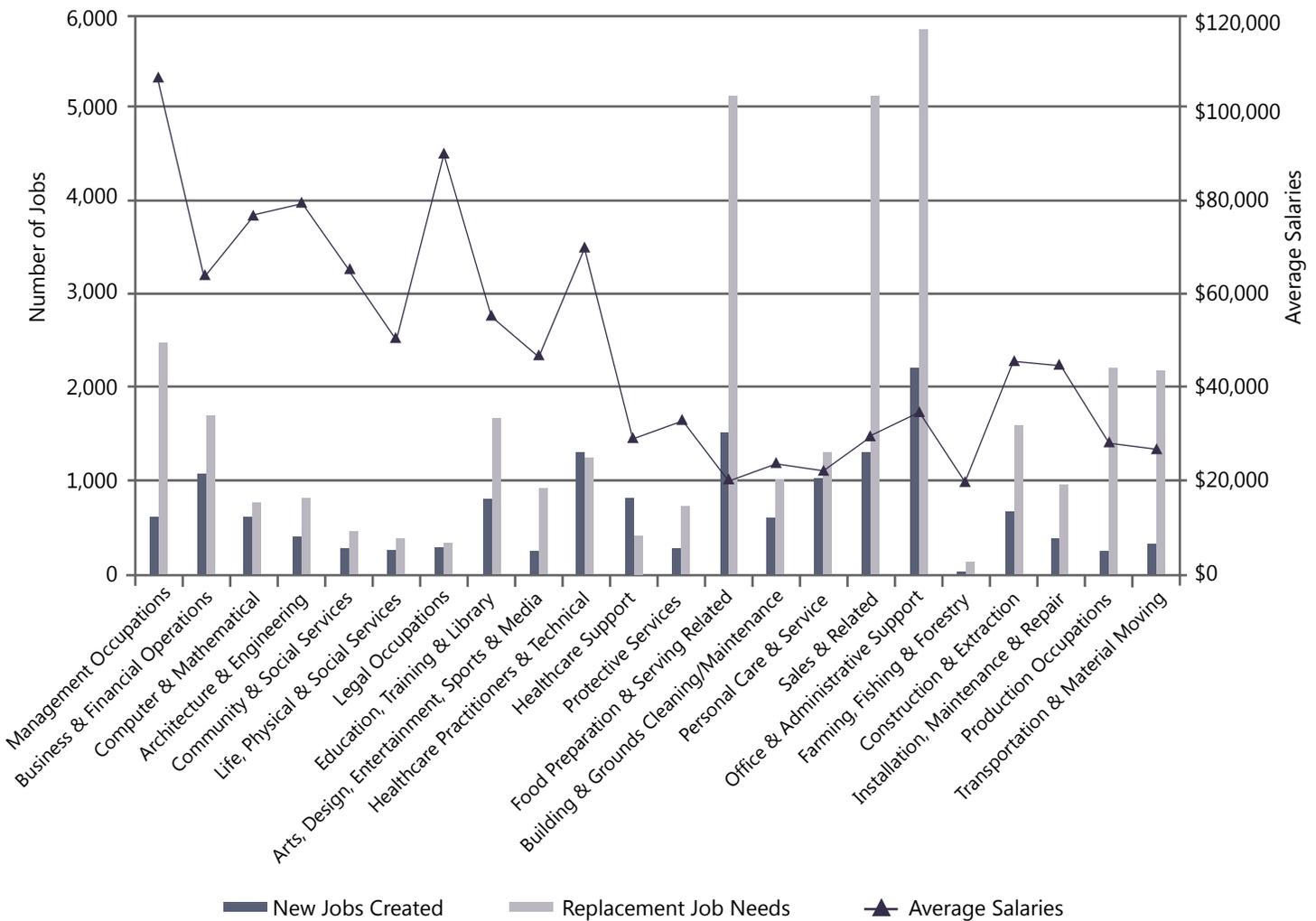
*Even with the potential for higher eventual salaries, many students take out **large student loans** and **accrue debt for years** after graduation. Prolonged uncertainty about current and future job market trends will continue to **hamper the employment and career prospects** of this generation.*

**BACKGROUND >>** Baby Boomers are the largest generation in American history and are responsible for the explosive economic and employment growth in Orange County from 1960-2000. However, the 2007-2009 economic collapse resulted in Baby Boomers losing substantial amounts of retirement savings, therefore prolonging their need to remain in the workforce.

More and more young graduates enter the labor force to find there are few jobs available in their desired industries not only because of the Great Recession, but because the Baby Boomers—who are well educated and have high levels of experience—continue to work and in essence stalled career ladder vertical movement.

As the population becomes more ethnically diversified and the educational systems become increasingly constrained by financial problems, Orange County will suffer in its ability to provide a talented workforce for its local businesses. These challenges coupled with the increasing college tuition rates will decrease the number of students able to further their educations and, as jobs become available, may not be able to grow a local pool of qualified workers.

**New Jobs Created and Forecasted Replacement Jobs for Orange County, 2008-2018**



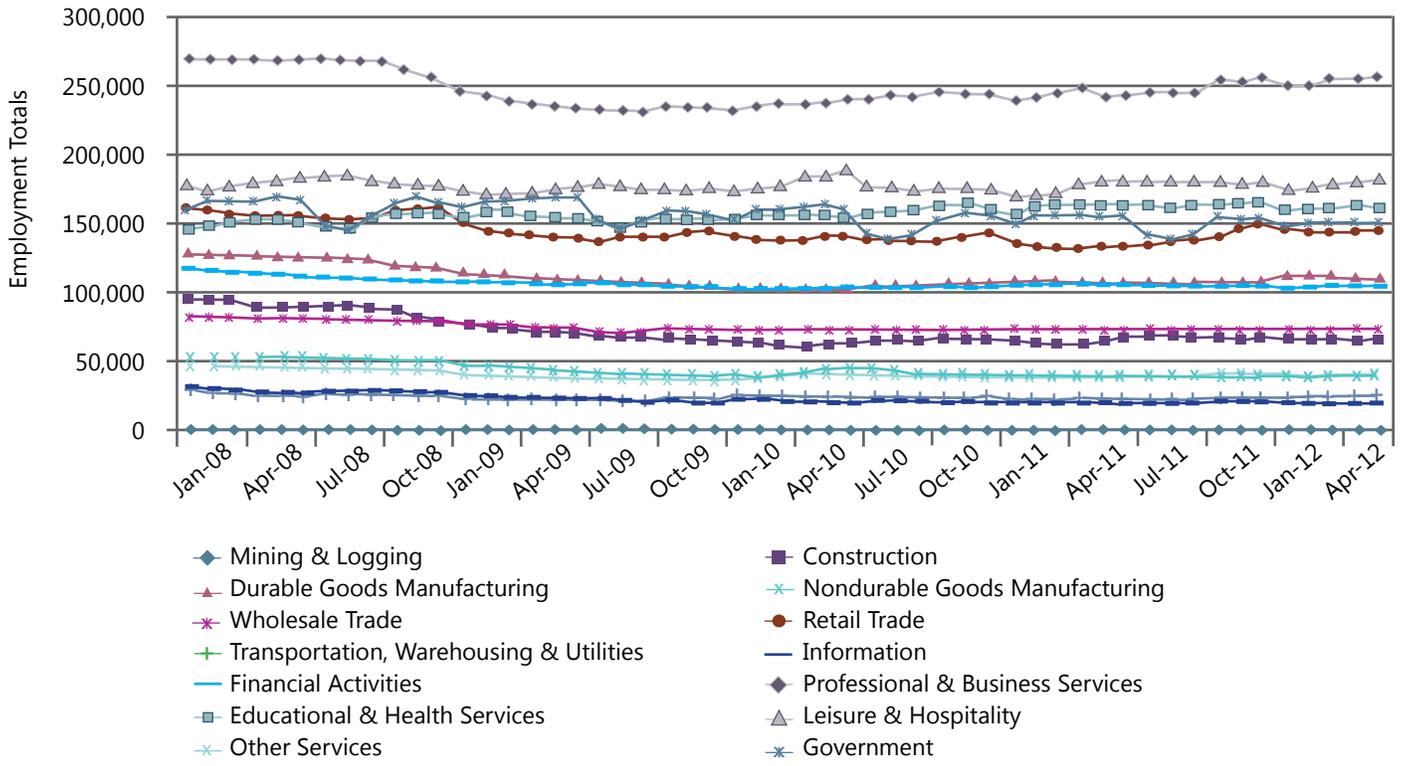
Source: California Employment Development Department

### Orange County 2012, Quarter 1 Wages by Industry

Occupation Title	Median Annual Wage, Q1 2012
Management Occupations	\$111,467
Business and Financial Operations Occupations	\$66,747
Computer and Mathematical Occupations	\$83,720
Architecture and Engineering Occupations	\$82,638
Life, Physical and Social Science Occupations	\$68,037
Community and Social Services Occupations	\$47,258
Legal Occupations	\$89,482
Education, Training and Library Occupations	\$53,997
Arts, Design, Entertainment, Sports and Media Occupations	\$48,152
Healthcare Practitioners and Technical Occupations	\$73,965
Healthcare Support Occupations	\$29,682
Protective Service Occupations	\$41,704
Food Preparation and Serving Related Occupations	\$19,406
Building and Grounds Cleaning and Maintenance Occupations	\$22,422
Personal Care and Service Occupations	\$22,797
Sales and Related Occupations	\$30,659
Office and Administrative Support Occupations	\$35,922
Farming, Fishing and Forestry Occupations	\$19,178
Construction and Extraction Occupations	\$48,693
Installation, Maintenance and Repair Occupations	\$44,699
Production Occupations	\$28,787
Transportation and Material Moving Occupations	\$27,165

Source: California Employment Development Department

### Orange County Industry Trends by Month, 2008-2012



Source: California Employment Development Department

**BUSINESS SENTIMENT** >> California State University, Fullerton's Q1 2012 Orange County Business Expectations survey asked Orange County executives and business leaders about the most significant factors impacting their companies:

- 56.8 percent cited the overall economy;
- 19.3 percent named government regulations; and
- 6.8 percent mentioned labor costs.

When asked about their overall view of the growth of their own industry:

- 51.2 percent believe that their industry will remain stable;
- 37.2 percent expect significant or some growth in their industry; and
- 11.6 percent predict some decrease in their industry.







**CROSS CUTTING CLUSTER DRIVERS  
AND EMERGING INDUSTRIES**

**2012/2013**

# A CLOSER LOOK AT CROSS CUTTING CLUSTER DRIVERS AND EMERGING INDUSTRIES

Programs and policies should support emerging industries, or the drivers of industry clusters, to accelerate their growth and proliferation throughout traditional industry clusters. International trade, information technology, creativity and green/cleantech are helping to drive employment growth and high wage, high multiplier occupations. The recession hampered the potential growth of these industries, yet they have rebounded well and are expected to not only help grow traditional sectors but, in time, become major sources of employment and revenue for the county.

## WHY IS THIS AN ISSUE?

Orange County is in the midst of transitioning into a knowledge based, post-Great Recession economy. Because of the Great Recession, many of the traditional high wage jobs of the past have disappeared and will not be coming back. New opportunities, however, are creating high wage jobs as a result of social and economic changes in the last decade due to international trade, information technology (IT), creativity and green/cleantech—four emerging industries that are blurring traditional cluster boundaries.

These four drivers overlay and crosscut traditional clusters, offering a better understanding of the county's workforce needs. Education and workforce development professionals began understanding the importance of these clusters in designing education and development policies. Orange County Workforce Investment Board and Orange County Business Council started to track crosscutting clusters several years ago.

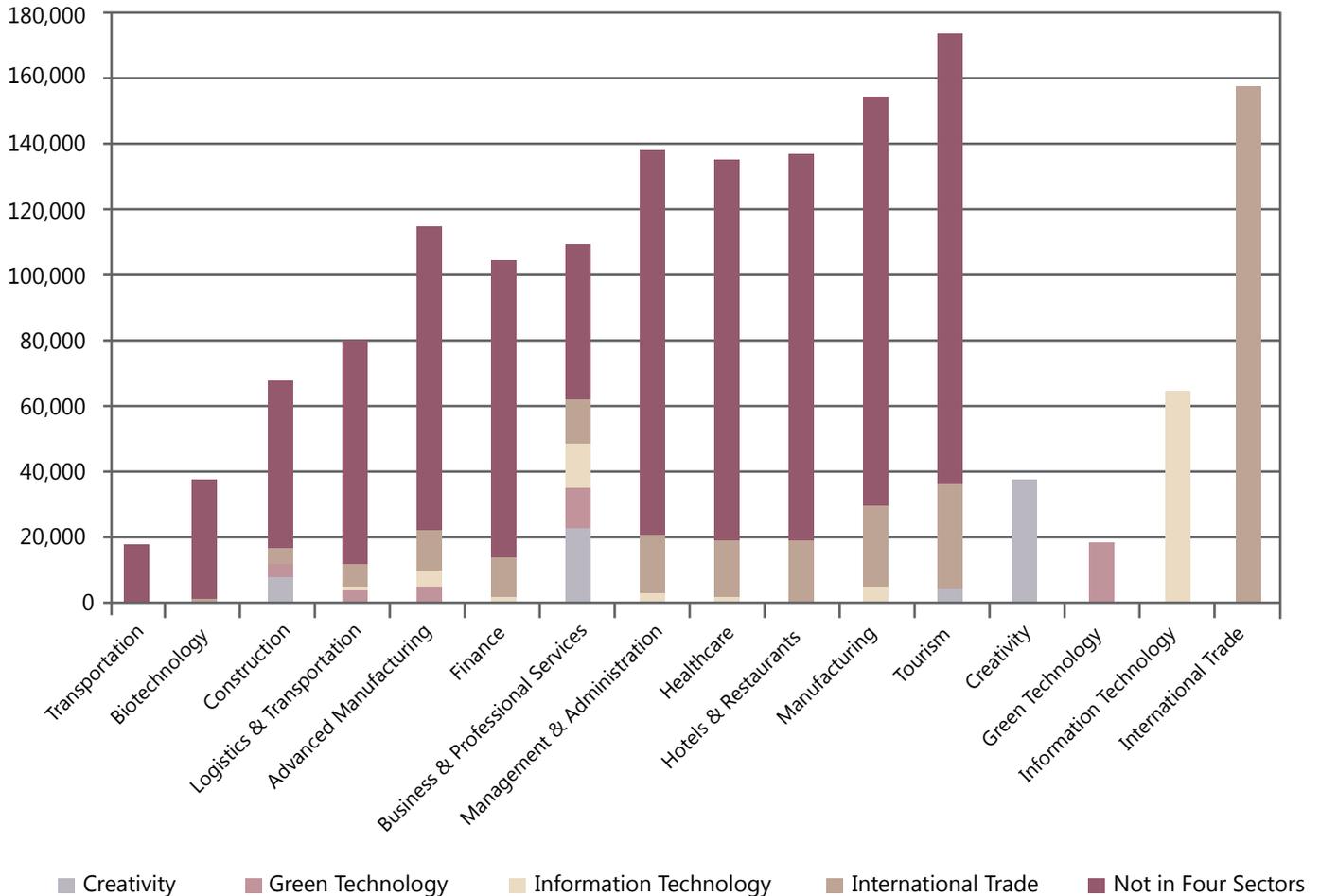
This section explores these interrelationships and how each driver overlaps and enhances existing cluster industries, creating both horizontal and vertical clusters. For example, while there are firms that are solely information technology (such as computer software and game developers such as Blizzard Entertainment), there are information technology functions and occupations within all other clusters. Creativity-oriented occupations are important components across clusters as well, such as architecture/interior design overlapping in the business and professional services, construction and tourism clusters.

These four drivers are increasingly important in developing and maintaining competitive advantage in Orange County's clusters. They generate value-creating jobs and initiate economic growth.

According to the estimated employment in 2011, international trade, information technology, creativity and cleantech are helping to drive employment growth and high-wage, high-multiplier occupations. While the recession did hamper potential growth of these industries, they have rebounded well and are expected to not only help grow traditional sectors but, in time, become major sources of employment and revenue for the county. International trade, information technology, creativity and green/cleantech added approximately 278,691 jobs. In the past year, jobs increased in international trade and information technology, while employment in the creativity sector slightly declined and green technology moderately declined:

- International Trade: 156,997
- Information Technology: 66,236
- Creativity: 37,200
- Green Technology: 18,258

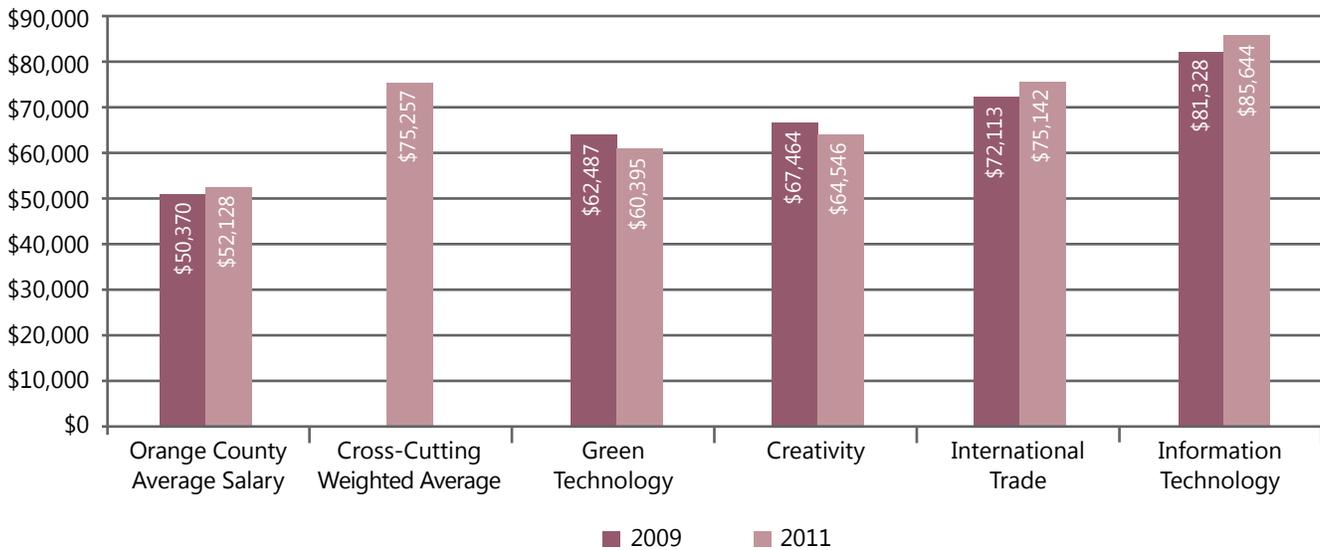
**Orange County Cluster Drivers, 2011**



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

In addition to growing employment opportunities, workers in these cluster drivers earn above average salaries (on average about \$75,527) compared to the average salary of \$52,128. International trade and information technology salaries are rising, while average wages in green technology and creativity have declined in the last year.

## Average Salaries in Orange County's Selected Industry Drivers, 2011



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

**INTERNATIONAL TRADE >>** Orange County's geographic location provides it with distinct advantages regarding international trade. Some of these advantages include proximity to the ports of Long Beach and Los Angeles; a well-connected freeway and road system for trucking; rail lines providing national trade linkages; proximity to international and domestic airports; and a large and growing presence of an ethnically diverse population. Combine these significant trade factors with Orange County's large and competitive manufacturing base, namely in computer software, electronics and transportation equipment. The county continues to rapidly cultivate trade relationships with growing economies such as China, Japan, South Korea, Mexico and Canada. These economic and employment opportunities emerge to drive the county's robust global trade industry.

California State University, Fullerton's Institute for Economic and Environmental Studies recently released its *2011 International Trade Economic Forecast: An Overview of Orange County and Southern California Exports*, which estimates that international trade accounts for well over 10 percent of Orange County's gross product and employs nearly 500,000 residents in Southern California. From 2003 to 2007, the total volume of exports grew an average of 13 percent with export values reaching \$19.7 billion in 2008—nearly doubling levels seen almost a decade ago. Although, with the onset of the Great Recession, exports experienced drastic declines and fell by 14.9 percent from \$19.7 billion to \$16.7 billion in 2009. Recovery from this decline is projected to occur within the next two to three years with export levels increasing by 20.8 percent in 2010, followed by increases of 12.9 percent in 2011, 7.2 percent in 2012, and 10.1 percent in 2013.

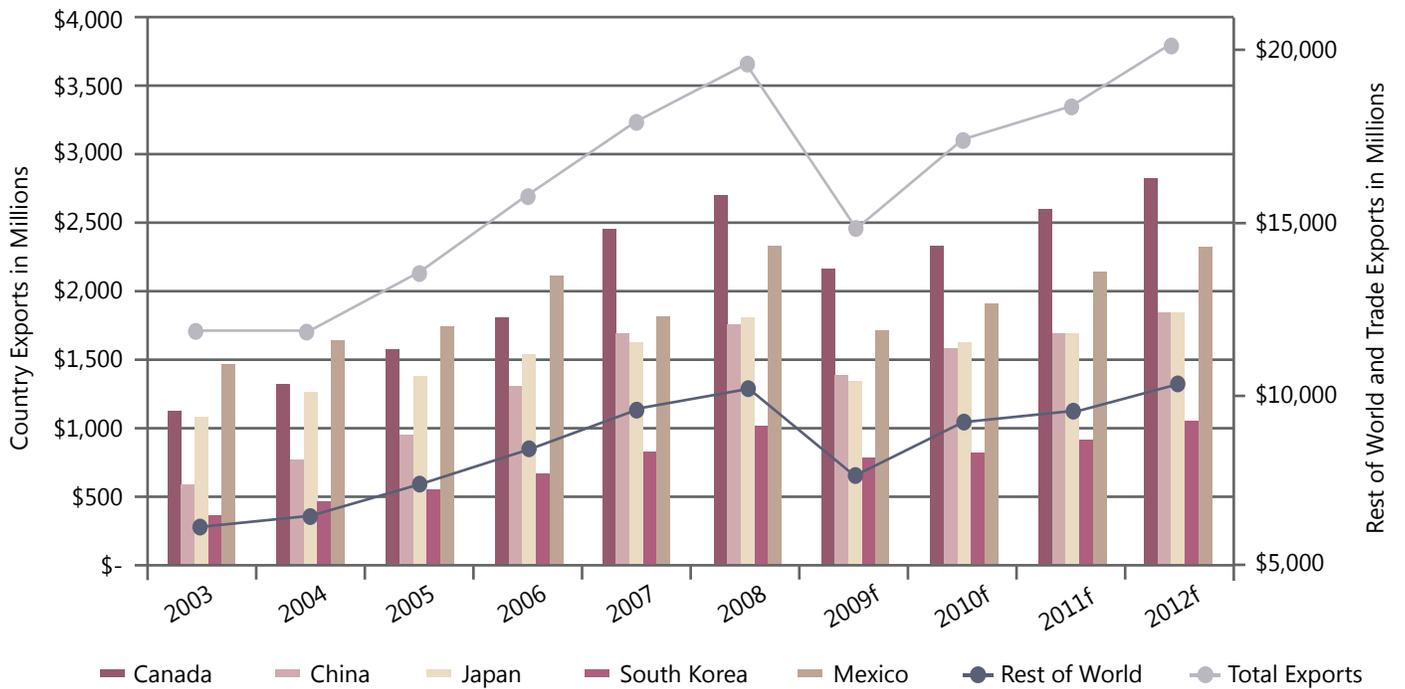
Orange County mainly exports to five countries, including Canada, China, Japan, South Korea and Mexico. Export growth is based on the expansion of the economies of those countries. China's economy expanded by 9.2 percent in 2011, at which time South Korea's increased by 3.5 percent and Canada's by 2.5 percent.

### FAST FACTS

*International trade accounts for well over 10% of Orange County's gross product and employs nearly 500,000 residents in Southern California.*

*Orange County mainly exports to five countries, each with expanding economies: Canada, China, Japan, South Korea and Mexico.*

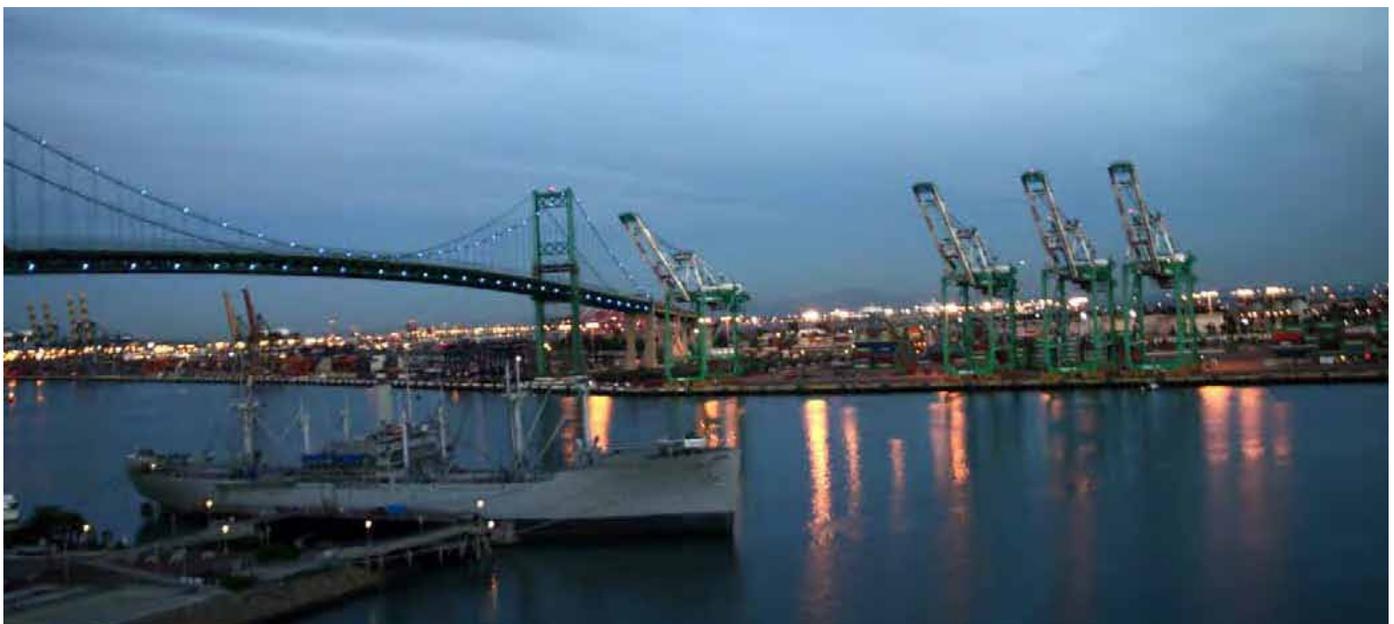
### Orange County Exports by Country, 2003-2012 Forecast



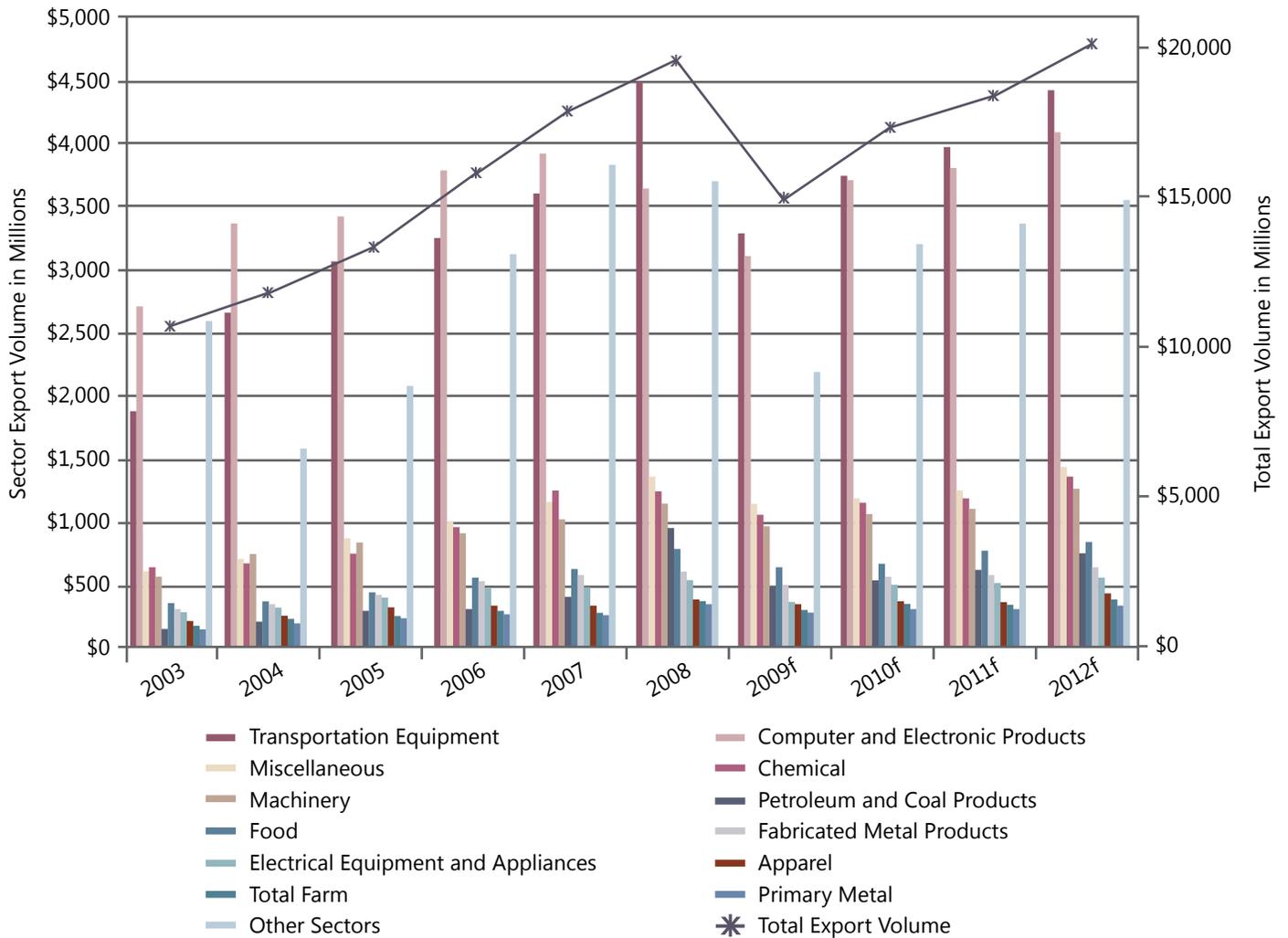
Source: IEES, California State University, Fullerton

The two most dominant export sectors for the county were transportation equipment and computer and electronic products. These sectors combined accounted for approximately 41.3 percent of total exports in 2008. Other large export trade sectors for Orange County include miscellaneous, chemical, machinery, petroleum and coal products, and food.

Exports of transportation equipment experienced the largest decline from 2008 to 2009 of over \$1 billion, and are not expected to attain pre-recession levels by 2012. On the other hand, computer and electronic products are slated for significant growth in the near future, reaching former 2008 export levels by 2010 and growing further by 2012. By 2013, Orange County expects exports of \$6.1 billion in computers and electronic products, increasing from \$3.8 billion in 2009. Furthermore, transportation equipment exports are expected to grow to \$5.5 billion in 2013—up from \$3.3 billion in 2009.



## Orange County Exports by Sector, 2003-2012 Forecast



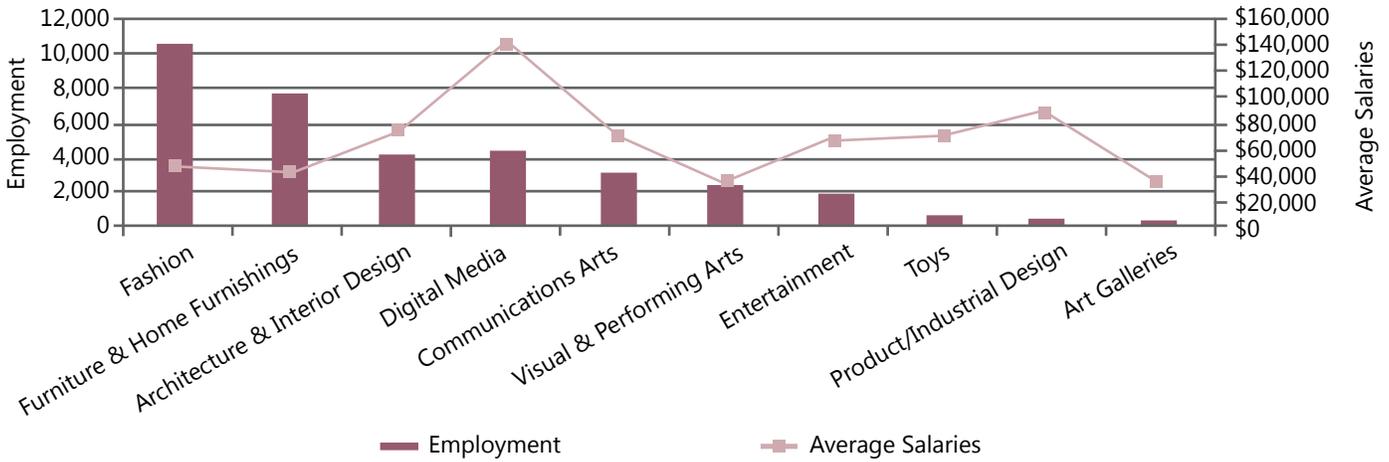
Source: IEES, California State University, Fullerton

**INFORMATION TECHNOLOGY >>** A highly skilled information technology workforce is essential to driving economic growth in a fast growing knowledge-based economy. Specialized skills—often requiring education or experience in science, technology, engineering and mathematics—are critical to supporting innovation in fields as diverse as computers, medicine and communication.

Orange County has long been a leader in computer and electronic software, service and product manufacturing, and a major portion of international exports are based on these products. Information technology occupations, namely those that connect businesses and provide computer software products and services, have aided in driving employment of various industries in the county. Professional and business services industries rely greatly on information technology for day-to-day operations with features such as email, video conferencing, cloud technologies and various computer software programs. These new technologies have allowed businesses to become more connected to their customers and promote business-to-business connections, which allow for increased collaborations and subsequently the expansion of this industry.

The average salary for the information technology industry is \$86,000, almost \$34,000 more than the average industry salary in the county. According to California's Employment Development Department, the highest wage occupation in the information technology industry is that of software publishers who earn an average of \$144,404 annually. This industry will be the main driver of employment and economic activity in the county. California's Employment Development Department reported that three of the top six occupations with the most job ads/openings in Orange County were related to information technology—such as web developers, computer systems analysts and computer software engineers/applications.

**Orange County Creative Industry Employment and Average Salaries, 2010**



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

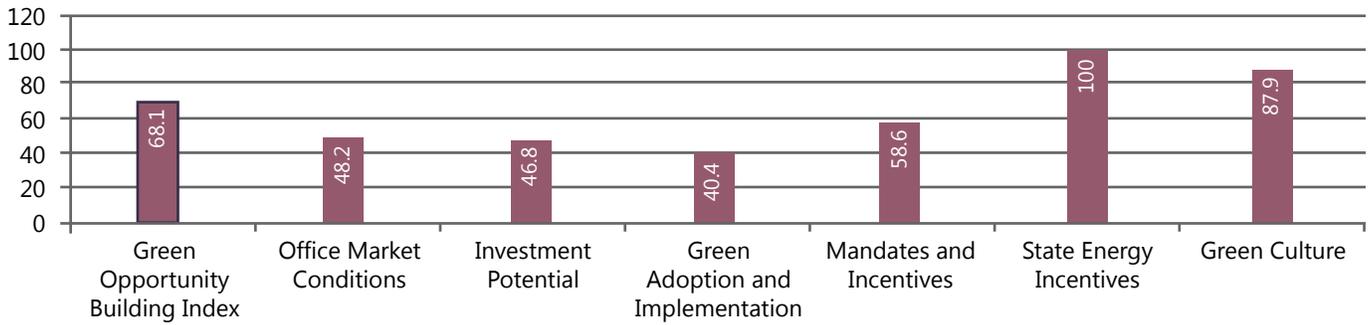
**CREATIVITY >>** Orange County's increasing focus on STEM (science, technology, engineering, math) as a critical competitive advantage has evolved into an emphasis on STEAM (science, technology, engineering, arts, math). The creativity sector is the market impact of businesses and individuals involved in producing cultural, artistic, and design goods and services. More specifically, it consists of creative professionals and enterprises that take powerful, original ideas and transform them into practical and often innovative goods, or inspire with their artistry.<sup>1</sup>

**GREEN/CLEANTECH >>** Many Orange County companies have altered business operations to include new environmentally sustainable practices, not only because of recent state and federal legislation, but also because efficient practices make good business sense. According to Next 10's 2012 *Many Shades of Green* report, Orange County's green employment increased by 62 percent, adding 6,900 jobs from 1995 to 2010 compared to the state green employment growth of 53 percent during the same period. Orange County's overall job growth of 15 percent was the third largest growth rate in California, behind the Sacramento area (113 percent) and Bay area (78 percent).

The biggest sectors for employment were air and environment; energy generation; energy efficiency; water and wastewater; and recycling and waste. Growth in energy generation added 120 jobs, expanding 3.0 percent during the period from 2009 to 2010. Energy efficiency subsections—solar appliances and devices, lighting and energy conservation products—grew 12 percent, adding a combined 110 jobs during the same period.

<sup>1</sup> Orange County's 2009 creative industry employment was estimated to be 37,900 direct jobs. Counting indirect jobs of this sector, total employment for Orange County grew to 77,200 jobs, with high annual wages offered by such occupations as digital media (\$123,530) and product and industrial design (\$90,328).

## Cushman and Wakefield/BetterBricks Green Opportunity Building Index and Sub-Index Scores



Source: Cushman & Wakefield/BetterBricks

Another measure of green activity comes from the Cushman & Wakefield/BetterBricks *2011 Green Opportunity Building Index*—an indicator that measures and combines six subsectors, ranging from office market conditions to green culture, to rank the top U.S. office markets on the basis of both real estate fundamentals and green investment considerations. Orange County's index score of 68.1 and 14th rank out of 30 places it behind San Diego (69.3) and Los Angeles (79.2). San Francisco scored the highest rating with 100.

The **office market conditions** measure the overall health of the region's office market, including Class A vacancy rates, overall vacancy rate, leasing activity as a percent of inventory, absorption as a percent of inventory, average cap rates for office transaction, peak-to-trough performance for asking rents, and peak-to-trough performance for occupancy.

The **investment potential** reflects forecasted future conditions through supply-side forces and demand drivers using Cushman & Wakefield's proprietary forecasting methodology. Orange County's score of 46.8 ranked it 12th out of the top office markets.

The **green adoption and implementation** take into account the existing adoption and potential implementation of green development and/or redevelopment in terms of such variables as LEED and ENERGY STAR office space. Orange County's score of 40.4 ranked it 11th behind San Francisco (83.2) and Los Angeles (56), yet in front of San Diego (32.9).

The **mandates and incentives** assess a local market's commitment to sustainable building practices through legislative mandates and incentives to build and refurbish green development, capital investments and retrofits. Orange County ranked 13th, along with San Diego but behind San Francisco and Los Angeles.

The **state energy incentives** measure utility and public benefit funds, efficiency programs and policies, building energy codes, appliance efficiency standards, financial and information incentives, and research and development. All cities located in California scored 100 on this measure.

The **green culture** measures the green economy, land use and planning measures, walkability and public transportation. Orange County scored 87.9, behind San Francisco (100) and San Diego at (88.1), but in front of Los Angeles (85.4).



# INDUSTRY CLUSTER AND OCCUPATION TRENDS

2012/2013

# UNEMPLOYMENT

While unemployment rates remain high due to the effects of the Great Recession, which officially ended in late 2009, Orange County's employment growth is performing better than surrounding Southern California counties and the state; and is on par with the nation.

## WHY IS THIS AN ISSUE?

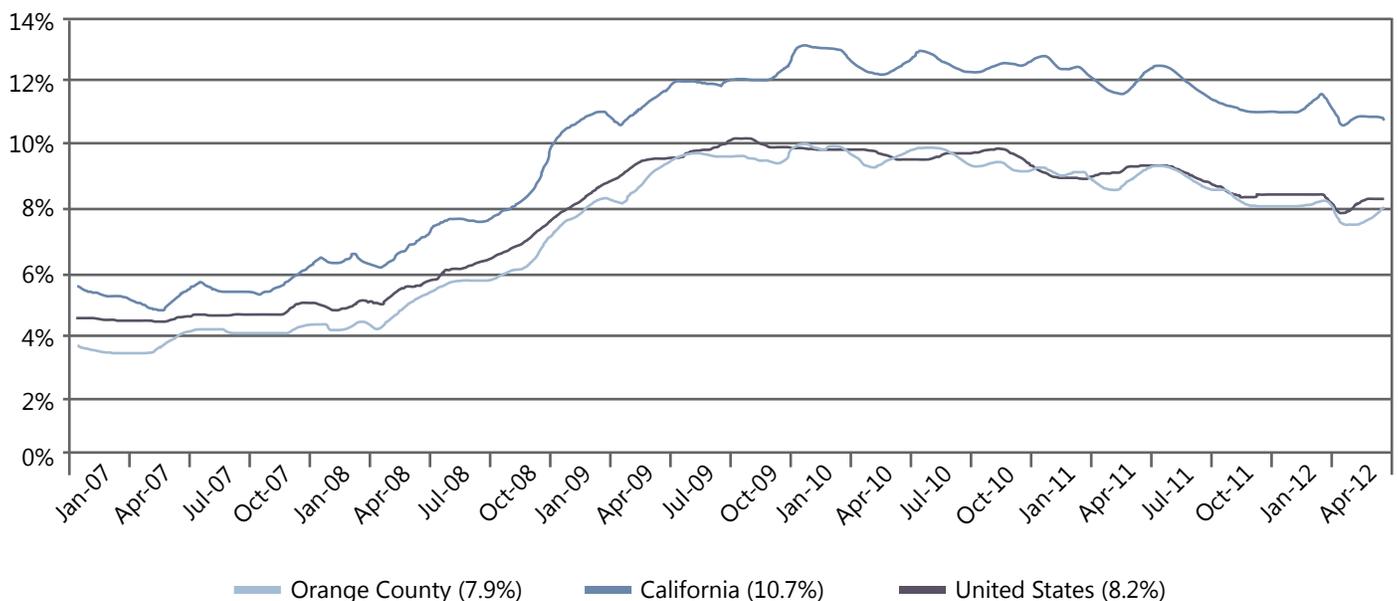
Orange County has outperformed surrounding communities because of its diverse industry cluster base; high wage industry composition; innovative and entrepreneurial business climate; welcoming business environment; well-educated and skilled workforce; and geographic location at the center of Southern California—a large market with advantageous international trade linkages. Orange County's recovery is proceeding at a moderate pace and is starting to pick up steam.

During the Great Recession, employers survived by forging new perspectives and competitive approaches, such as operating with a smaller and more efficient workforce. As Orange County continues recovering, many employers have maintained this approach, choosing to grow only as needed. This has slowed employment growth at a time when it is critical to the county's economic success.

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

Unemployment peaked at 10 percent in January 2010. Since then, Orange County has made significant advances toward economic recovery by creating approximately 60,000 new jobs in the private sector. Unfortunately, the unemployment rate is still approximately three percent higher than what was traditionally seen prior to the Great Recession. As of June 2012, the unemployment rate in Orange County was 7.9 percent compared with 8.2 percent for the U.S. and 10.7 percent for California. While still high, for Orange County this estimate represents improvement from its 9.2 percent estimate a year earlier.

### Unemployment Rates of Orange County, California and United States



# INDUSTRY AND OCCUPATIONAL GROWTH

Concentrating education, workforce and economic development programs to support key industry clusters will help accelerate employment growth and provide Orange County with high impact and high multiplier occupations, further driving economic recovery.

## WHY IS THIS AN ISSUE?

Industry clusters tend to have higher growth and generate higher wage occupations. Industry clusters, different from industry sectors, are defined as geographic concentrations of interconnected companies, specialized suppliers, service providers and associated institutions in a particular field. On the other hand, industry drivers are emerging industries that are found in a large majority of industry clusters (as illustrated in the Cluster Overlay section) and help to drive employment growth in those clusters.

During this period of global economic recovery and globalization, it is important for Orange County to build its competitive advantage around its growing and emerging industry clusters. Sustained economic growth will be achieved through Orange County's diversified industry sector base, emerging industry clusters, and industry drivers, effectively creating pathways for increasing economic activity.

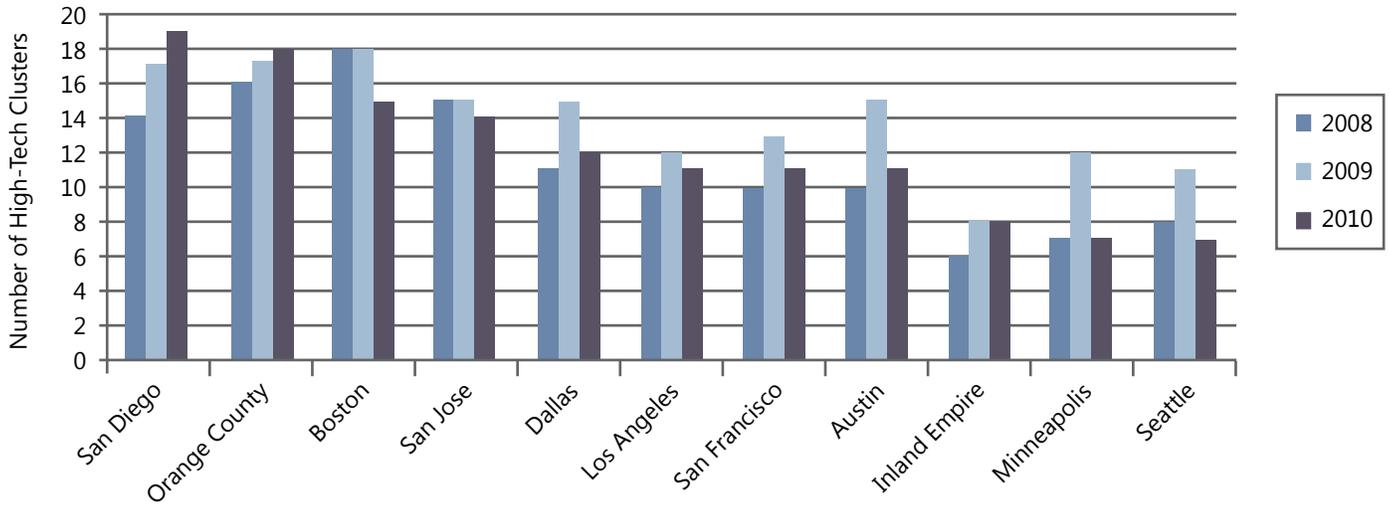


**BACKGROUND >>** The clusters discussed in this section represent three-fourths of all Orange County occupations and were created to highlight the key industry sectors that drive employment and economic activity in the region. Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in particular fields. Clusters emerge because companies engaged in a similar industry recognized that they can boost their productivity through locating near each other, thus enhancing their ability to compete collectively and cooperatively. Individual firms in a cluster benefit from comparative advantages associated with geographical concentrations such as access to a common pool of specialized labor, infrastructure, intellectual property and lower transaction costs between firms.

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

The county's concentration on communication, computer software programming and pharmaceutical industries has led to competitiveness and increased development in several high-tech clusters. Orange County is ranked only behind San Diego and is significantly ahead of Boston in the number of high-tech clusters in the nation for 2010. The number of high-tech clusters increased from 17 in 2009 to 18 in 2010, comparing favorably to San Jose and Los Angeles, which had 14 and 11 respectively.

### High-Tech Cluster Diversification Regional Comparison, 2008-2010

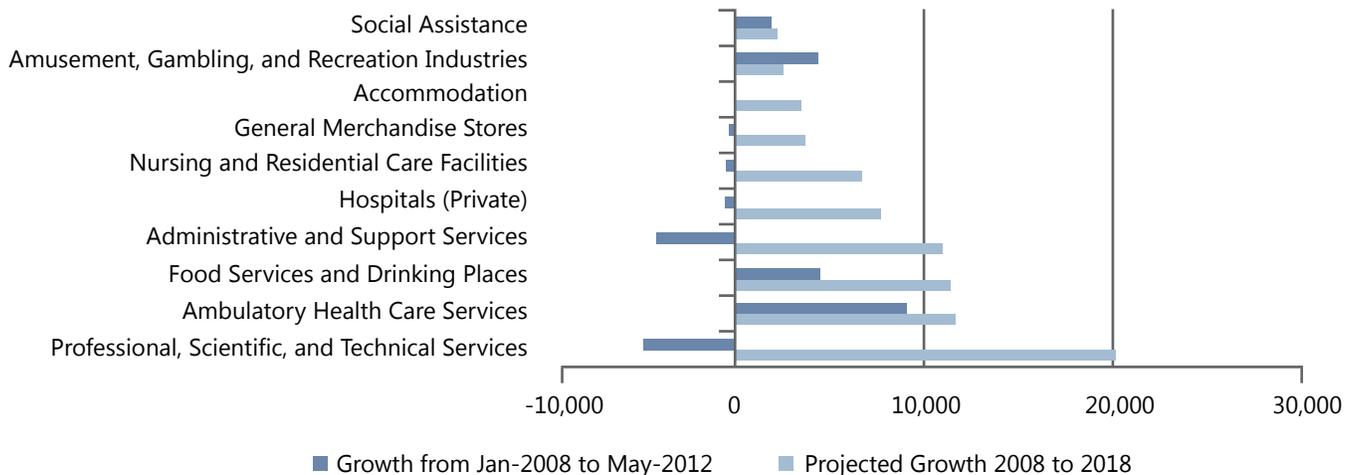


Source: Milken Institute

**INDUSTRY SECTOR OVERVIEW >>** In 2010, California’s Employment Development Department released its 2008—2018 employment projections for Orange County. While there are still six years left in the projected time frame, current numbers propose a different story. Projections estimated that Orange County’s industry sector employment would grow by 8.4 percent, but since the beginning of 2008 industry employment has fallen by 6.8 percent. This gap between the current and projected employment growth is a result of the uncertainty and lasting impacts of the Great Recession.

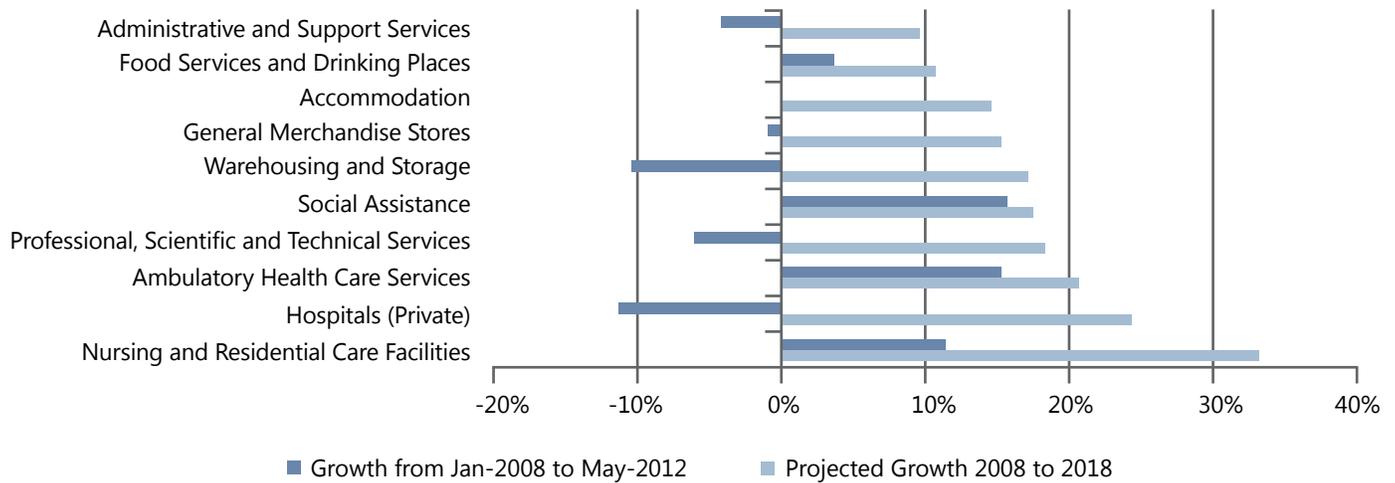
When looking at the industries that California’s Employment Development Department projected to grow the fastest—both in terms of absolute and percentage growth—during the 2008 to 2018 period, there is a more diverse picture. While some are on track to meet or exceed the projections, others are far behind or have experienced employment loss since 2008. The professional, scientific and technical services industry was projected to increase the most in terms of absolute growth but instead lost 6,100 jobs. The administrative and support services followed with a 4,900 loss in employment. In terms of percentage growth, hospitals (private) and warehousing and storage were projected to be among the top 10 fastest growing industries, yet experienced an 11.6 percent and 10.2 percent decrease, respectively. Other industries are on track to exceed EDD projections, such as ambulatory healthcare services and social assistance industries, which saw gains of 9,100 and 15.6 percent, respectively.

### Projected vs. Current Absolute Industry Growth



Source: California Employment Development Department

### Projected vs. Current Percent Industry Growth



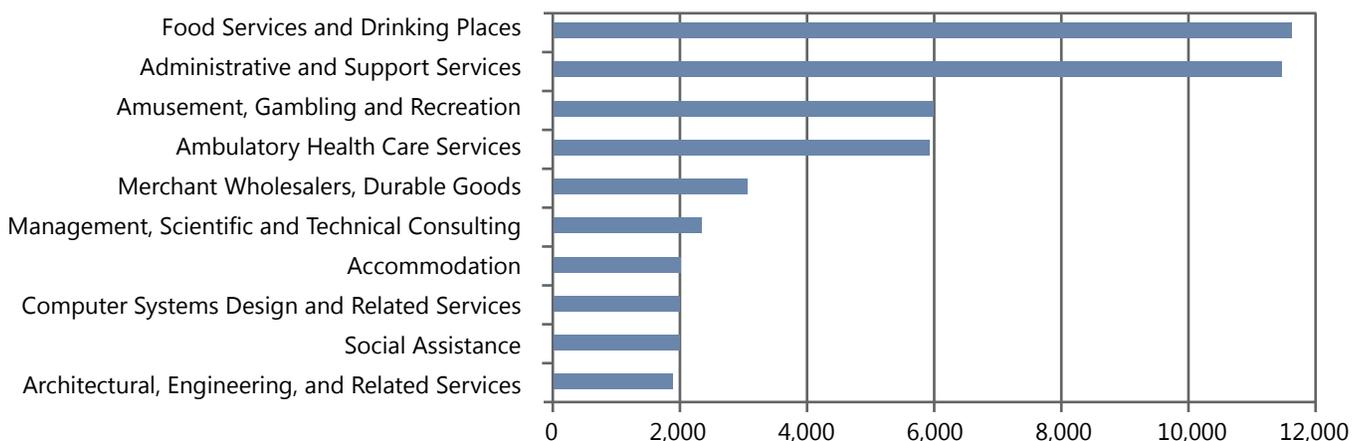
Source: California Employment Development Department

With the Great Recession ending in late 2009, Orange County has seen the rise of certain industries over the past two and a half years. The industries that have shown the most growth since the end of the Great Recession are the same ones that will prosper in the immediate future.

These top ten industries, in terms of absolute and percentage growth, represent the ones that adjusted well to the difficulties posed by the Great Recession and capitalized on the current recovery period. Orange County can expect to see continued growth of the service sectors—with food services and drinking places, and administrative and support services experiencing the largest absolute growth at 11,400 and 11,300, respectively. After administrative and support services, there is a major drop in absolute growth. This drop signifies the county’s need for continued industry development, particularly in higher wage industries.

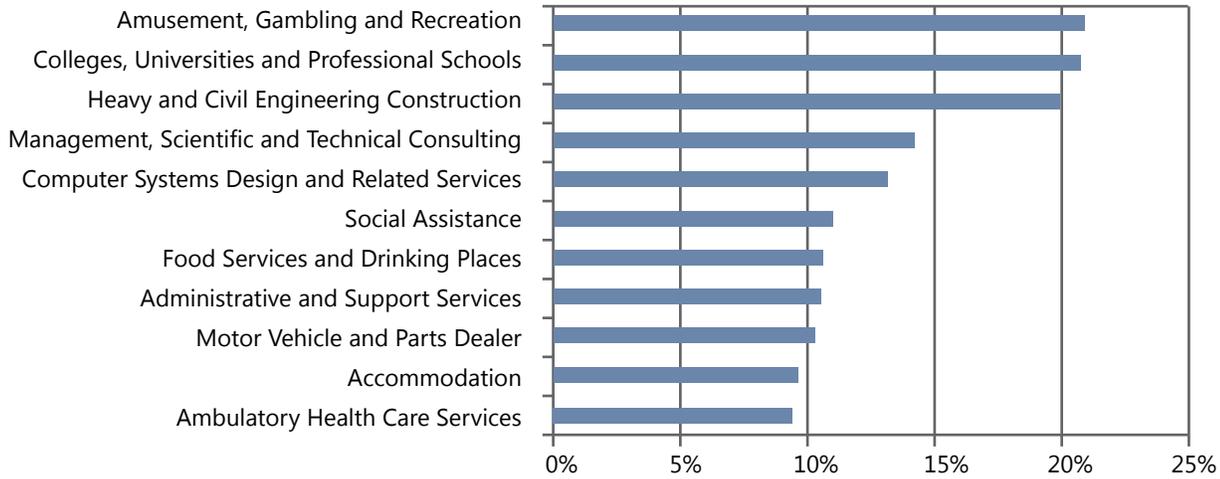
The technical industries in Orange County have also rebounded well from the Great Recession with the heavy and civil engineering construction and computer system design and related services experiencing significant percentage growth. The continued development and growth of these technical industries, among others, will be important for the county’s future as a leader in the high-tech industry.

### Top Ten Fastest Growing Industries in Orange County by Absolute Growth, Jan-2010 to May-2012



Source: California Employment Development Department

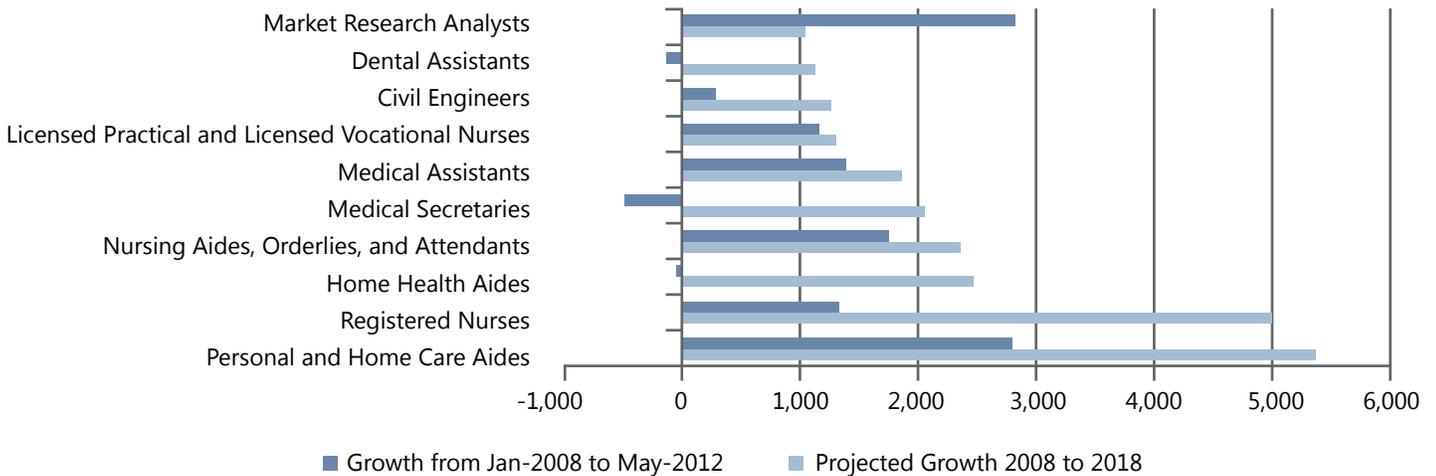
### Top Ten Fastest Growing Industries in Orange County by Percent Growth, Jan-2010 to May-2012



Source: California Employment Development Department

**OCCUPATIONAL OVERVIEW >>** During the 2008 to 2018 period, California’s Employment Development Department projected that Orange County would add 135,000 jobs by 2018. Although, estimates indicate that the county currently has 7,500 fewer jobs than 2008 levels. This decrease is the result of major losses during the Great Recession from 2008 to the end of 2009. Since 2010, relatively steady employment growth has added approximately 30,000 jobs to the Orange County economy. Occupations identified as the fastest growing in terms of absolute growth have kept pace with or exceeded the EDD projections. Only home health aides, medical secretaries and dental assistants experienced minor net declines since 2008. With the exception of those three, the healthcare industry continues to grow and be a strong presence in the county.

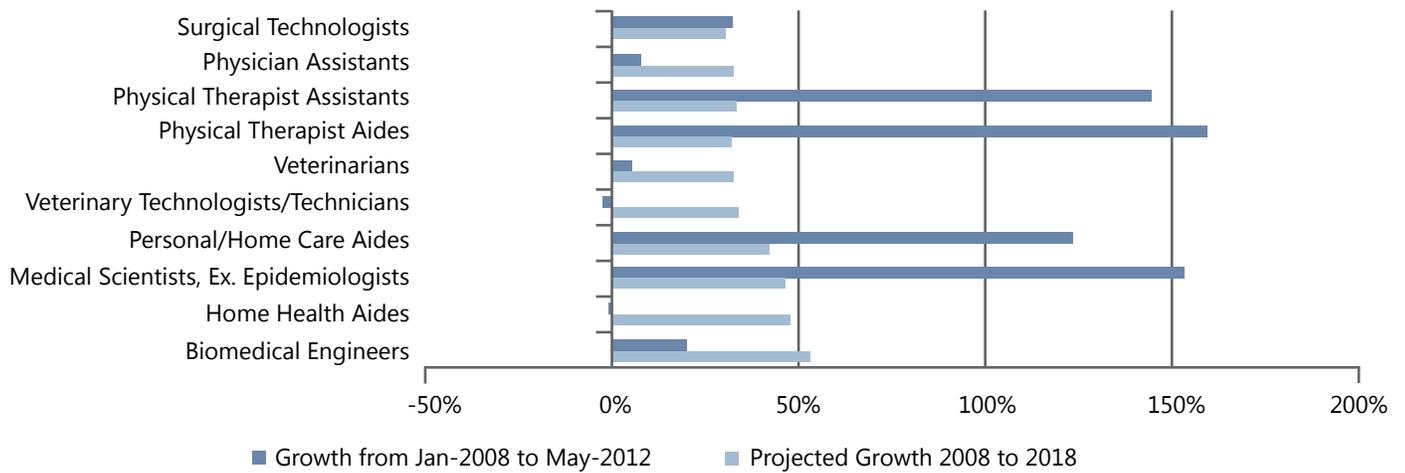
### Projected vs. Current Absolute Occupation Growth



Source: California Employment Development Department

In terms of percentage growth, biomedical engineers (52.2 percent), home health aides (47.5 percent), medical scientists (45.7 percent), and personal and home care aides (42.8 percent) were projected to be the fastest growing occupations from 2008 to 2018 in Orange County. Some, such as biomedical engineers, are on track to meet projections. Home health aides and veterinary technologists/technicians, on the other hand, have experienced slight declines. Some occupations—all in the healthcare industry—have far exceeded their growth projections with physical therapist aides experiencing the largest growth by 162 percent since 2008. The top 10 high growth occupation categories demonstrate and reinforce current and projected growth trends of the information technology, biomedical and healthcare clusters.

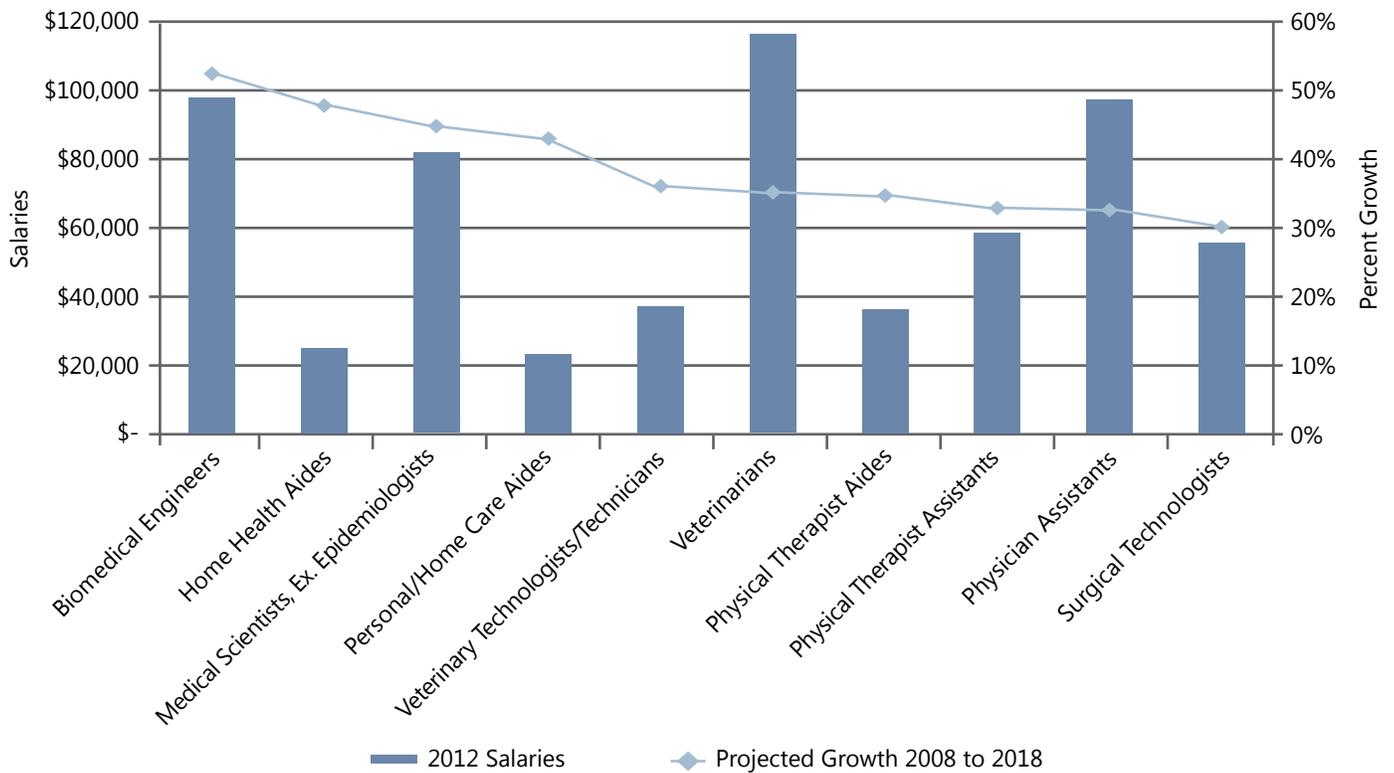
### Projected vs. Current Percent Occupation Growth



Source: California Employment Development Department

Five of the 10 high growth occupations have salaries above \$50,000 and are split between the high-tech, management and administration, and healthcare clusters. Many fast growing occupations pay above average salaries, as often workforce demand exceeds the existing supply of skilled workers, leading to workforce shortages. Fast growing occupation categories are ripe areas to consider for targeted education and workforce programs.

### Average Salaries of Fastest 2008-2018 Growing Occupations in Orange County



Source: California Employment Development Department

# CLUSTER EMPLOYMENT AND SALARIES

During this time of economic recovery, Orange County must focus on the creation of high wage jobs and the development of a skilled workforce to fill them. More high wage, high impact jobs must be created to replace those lost during the Great Recession and accelerate overall economic recovery.

## WHY IS THIS AN ISSUE?

The Great Recession led to the loss of many of Orange County's high wage occupations. Since then, the county has worked diligently to increase job availability, though much of these increases in job growth have been attributed to employment growth in lower income clusters. As a result, Orange County must continue to focus on the attraction and creation of high wage occupations, while developing a well-educated and skilled workforce to meet the demands of these new roles. These high wage occupations will play a significant role in Orange County's ability to maintain its reputation as a vibrant place with a unique combination of a high quality of life and economic vitality—attributes that will attract residents, large corporations and entrepreneurs to the region over time.

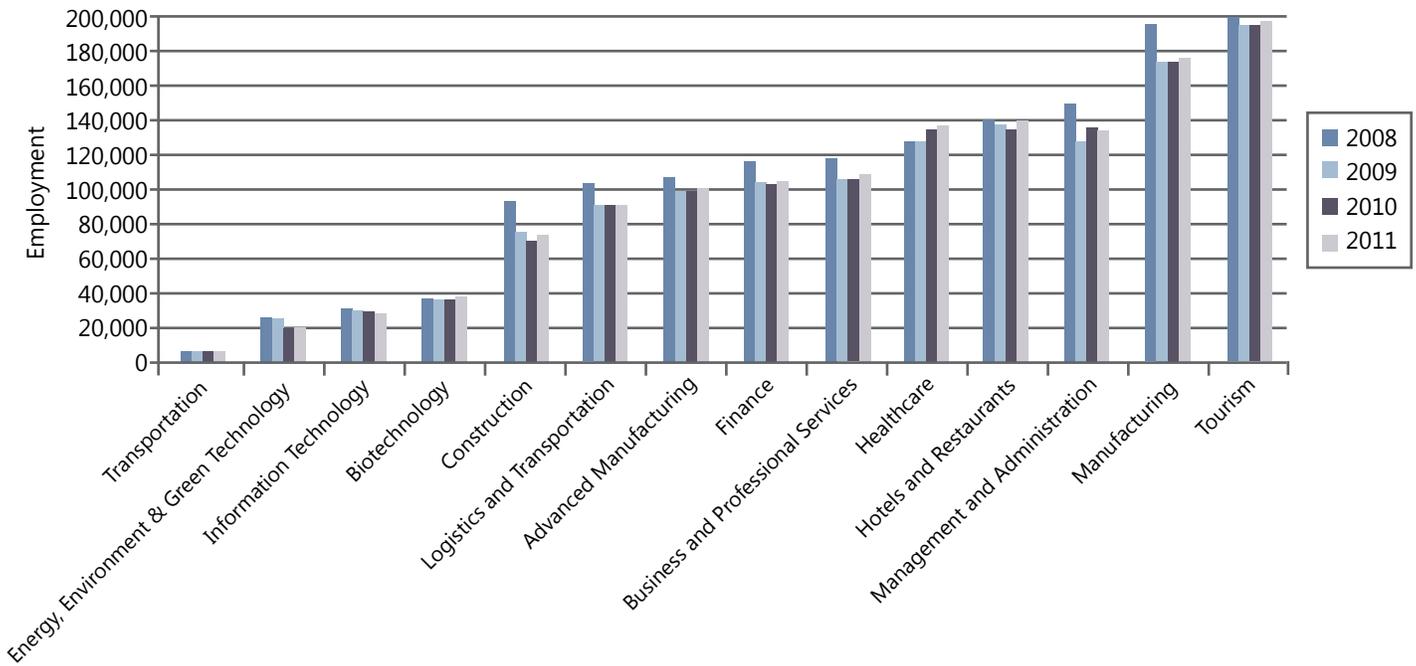
## HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Tourism remains Orange County's largest cluster in terms of employment. The largest employment growth in the past year was seen in the hotel and restaurant cluster (of just under 6,000 jobs), which represented over 35 percent of total cluster employment growth from 2010-2011. Following behind the hotel and restaurant cluster in terms of absolute employment growth business and professional services (3,642 jobs), healthcare (2,584 jobs) and biotechnology (2,153 jobs).

Overall, cluster employment conditions are improving with only four clusters experiencing a decline last year compared to nine in the previous year. However, Orange County continues to see declines in the energy, environment and green technology and information technology clusters.



## Orange County Cluster Employment, 2008-2011



Source: OCBC analysis of California Employment Development Department QCEW dataset

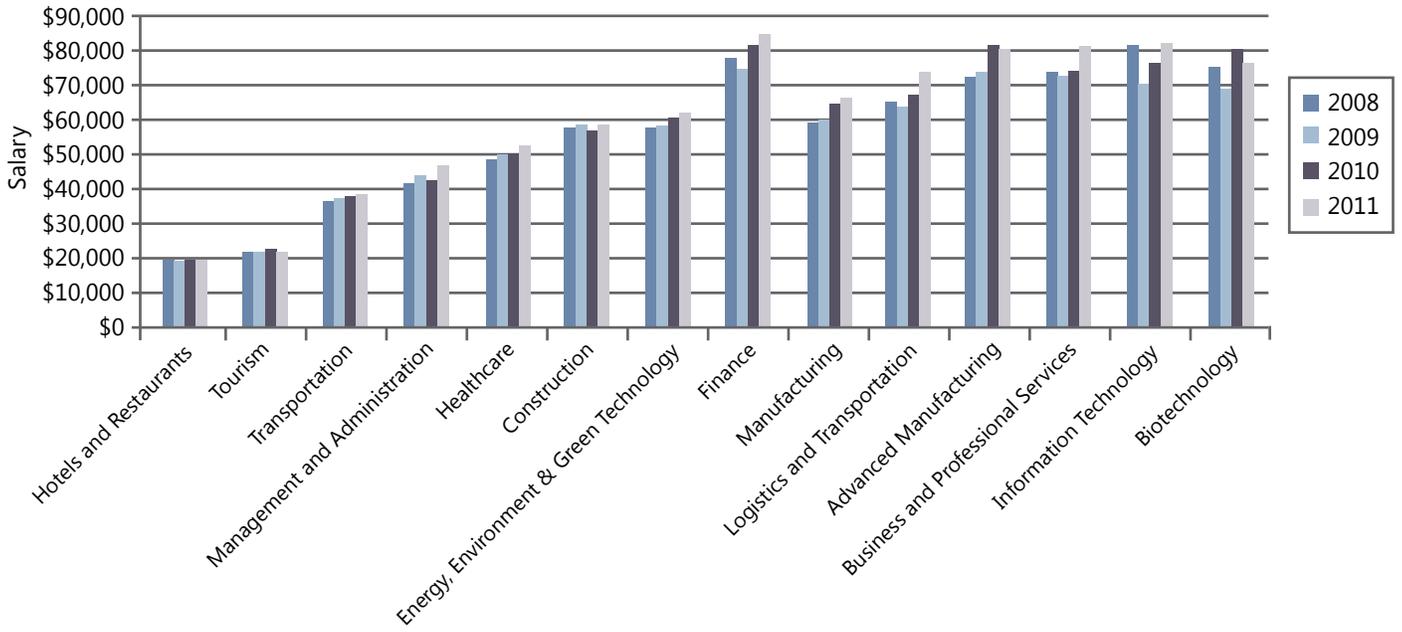
The average wage (\$59,791) for all private industries in Orange County has risen significantly over the past year. This has continued the positive trend from the previous year, after wages fell as a result of the Great Recession. After steep declines just before and during the Great Recession, wages in the finance cluster have topped wages in other clusters with an average salary of \$84,376 in 2011. The information technology and business and professional services cluster also showed strong growth from 2010-2011 with the second and third highest average salaries at \$81,626 and \$80,912, respectively. Overall 2011 was a positive year for Orange County with most clusters experiencing an increase in average salary. The only declines in average wages were in the advanced technology and biotechnology clusters with a two percent and five percent decrease, respectively.

There is a trend where the largest employment growth occurs in the lower wage industries, such as the hotel and restaurant and healthcare clusters. While this contributes to much needed employment growth, the high cost of living will make it difficult for those employed in these clusters to live in Orange County. As a result there must be continued cluster and workforce development to move these residents into higher wage occupations.

### FAST FACT

The **average wage (\$59,791)** for all private industries in Orange County has **risen significantly** over the past year. After steep declines just before and during the Great Recession, **wages in the finance cluster have topped wages in other clusters** with an average salary of **\$84,376** in 2011.

### Orange County Cluster Salary, 2008-2011



Source: OCBC analysis of California Employment Development Department QCEW dataset



# EDUCATION AND WORKFORCE TRAINING TRENDS



2012/2013

# EDUCATION AND WORKFORCE TRAINING TRENDS

In order for Orange County to maintain its competitive advantage of a large, well-educated workforce, improved policies and programs must be created to increase college and university level educational attainment across all sectors.

## WHY IS THIS AN ISSUE?

A region's ability to improve its growth industries, increase overall wages, attract high-wage occupations, expedite vertical movement in career ladders, and increase innovation is directly tied to advancing the educational attainment of its workforce. The availability of a diverse, well-educated pool of individuals in the workforce provides a competitive advantage and is crucial to increasing overall wage levels and promoting broad economic development across the county. High levels of well-educated individuals also help to promote innovation across industries, by facilitating and expediting the emergence of improved technologies and business processes.

During the Great Recession, many Orange County industries were forced to operate with a smaller, more efficient workforce. As the economy recovers and industries begin to expand their workforces, it is important for the county to provide businesses with a well-educated workforce. In order to meet this demand, programs and policies must be implemented to increase college and university level educational attainment, as well as adult education. In doing so industries will be provided with a competitive advantage, promoting continued economic development throughout the County.

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

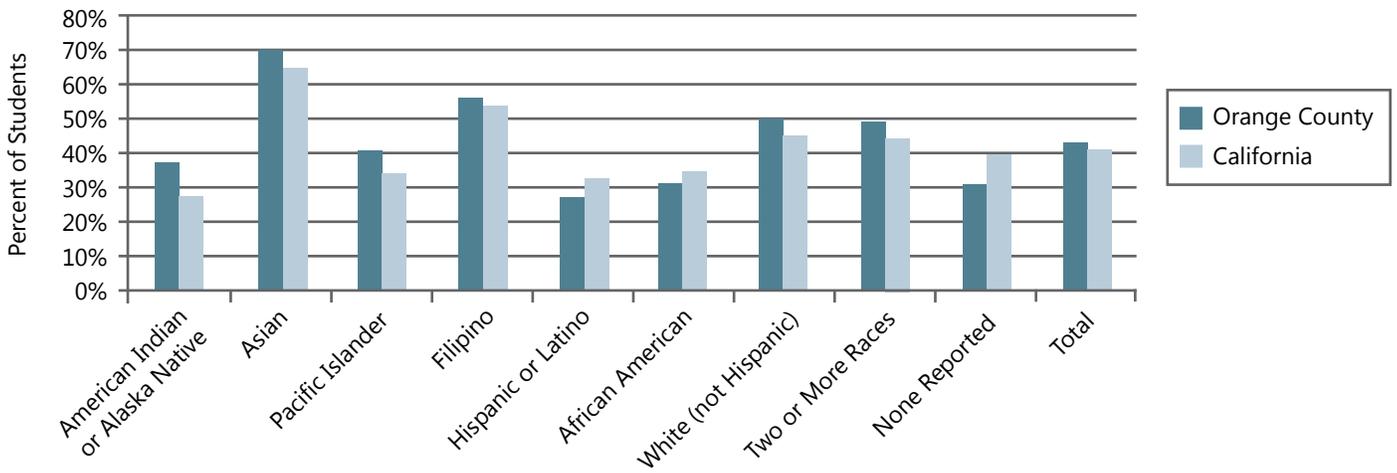
As of 2010—2011, approximately 43 percent of Orange County high school students were eligible for entry into the UC/CSU university systems. This rate shows a significant improvement with a seven percent increase in the past year. However, this latest increase has only been the most recent upturn in a series of ups and downs in the eligibility rate since 2006.

While Asians continue to have the highest levels of eligibility, the issue arises in the eligibility of Orange County's minority populations. Current efforts to address the low rates have clearly had an impact on the Latino population, which experienced an increase of over 10 percent in their eligibility rate over the past year. This increase was significant, but the African American and Latino eligibility rates in Orange County continue to perform poorly compared to other ethnicities and remain below the state levels.

### FAST FACT

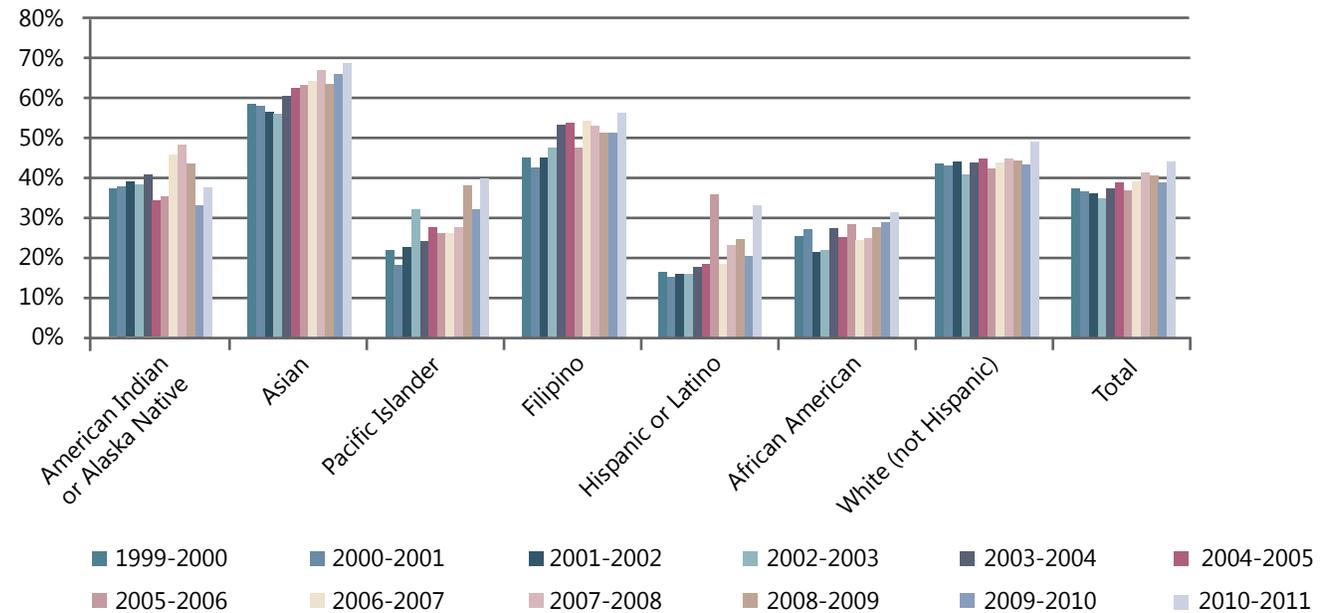
*Efforts to address the low college eligibility rates among Latinos have clearly had an impact on the **Latino population**, which **experienced an increase of over 10%** in their eligibility rate over the past year. However, African American and Latino eligibility rates continue to **perform poorly compared to other ethnicities** and remain below state levels.*

### UC/CSU Eligible Orange County and California Graduates, 2010-2011



Source: California Department of Education, Educational Demographics Unit

### UC/CSU Eligible Graduates by Ethnicity, 1999-2011



Source: California Department of Education, Educational Demographics Unit

**BACKGROUND >>** Orange County has historically been a well-educated community with educational attainment levels consistently higher than those of the state. Its fast growing industries and high quality of life have served as a magnet for both young and experienced professionals, while the university system has provided the county with a consistent flow of well-educated workers. The talent pool in Orange County has allowed high-wage occupations to grow, allowing the region to generate higher wages than surrounding areas and peer regions across the nation.

With much of Orange County's future job growth expected in industries requiring advanced or specialized degrees, demand for individuals with these degrees will increase significantly. As a result, it will be important for the county to prepare its current and future workforce to meet this new demand. College level and advanced degree educations are increasingly important for job opportunities and high-wage occupations. As technologies improve, business processes become more efficient, and job competition increases; in turn, the need for individuals with advanced, specialized degrees increases dramatically.

# API, SAT, AND HIGH SCHOOL EXIT EXAM PERFORMANCE

Educational achievement gaps between Orange County school districts must be addressed in order to ensure all students receive a quality education. By improving the performance of districts that are underperforming while supporting those that are performing well, Orange County will be able to maintain its competitive advantage of a well-educated workforce.

## WHY IS THIS AN ISSUE?

Orange County's academic performance has seen steady improvement over the past decade. While this suggests improved individual school district performance, some schools are still underperforming. The Academic Performance Index (API), Scholastic Assessment Test (SAT) and the High School Exit Exam provide measures of student performance. These measures help decision-makers assess possible shortfalls in their educational systems and identify areas that need improvement. Areas with higher overall test scores tend to attract more residents since parents look for well-structured educational systems for their children.

Measures of academic performance also provide employers with a broad sense of how prepared the future workforce will be. If the county performs well, it will decrease the chances of local employers recruiting from other areas and thus increase the available jobs for the local workforce.



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

While efforts to improve poorly performing school districts have begun to enhance performance levels, achievement gaps between school districts remain significant. Orange County must continue to implement programs and policies focusing on improving educational attainment, particularly among English language learners and economically disadvantaged populations.

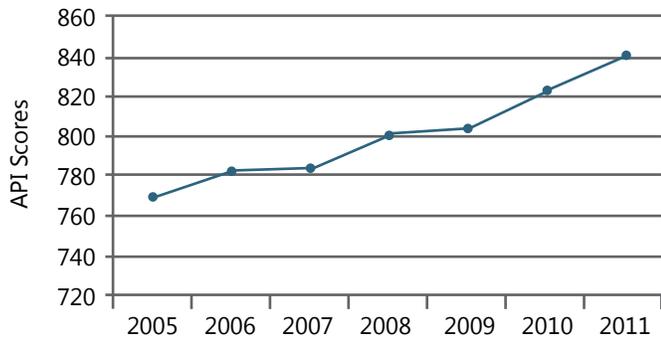
Across API, SAT and High School Exit Exams, Orange County performs well compared to peer regions, the state and the nation. Yet within the county, there are significant gaps between high performing schools and low performing schools. In order to continually increase its overall educational prowess, this gap will need to be narrowed.

Programs and policies should be targeted at not only enhancing education performance in underperforming districts, but also aimed at ensuring these students graduate and are eligible for advanced degrees. In doing so, Orange County will effectively improve its workforce, thus attracting more people into the region as well as high-tech, high-wage businesses and occupations.

**ACADEMIC PERFORMANCE INDEX >>** The Academic Performance Index (API) measures the academic performance of individual schools based on the results of statewide testing. The API uses an improvement model, where the API from one year is compared to the API from the prior year to measure improvement.

Orange County has had continued improvement in its average API scores since 2005. In 2011, the average API score was 844, which was more than a nine percent increase over 2005's 773 average API score. While Orange County's average API scores have improved, individual school districts have also shown improvement with the Garden Grove and Orange School Districts finally attaining the statewide performance target of 800. However, Anaheim and Santa Ana School Districts have failed to meet the state standard, with scores of 763 and 742, respectively.

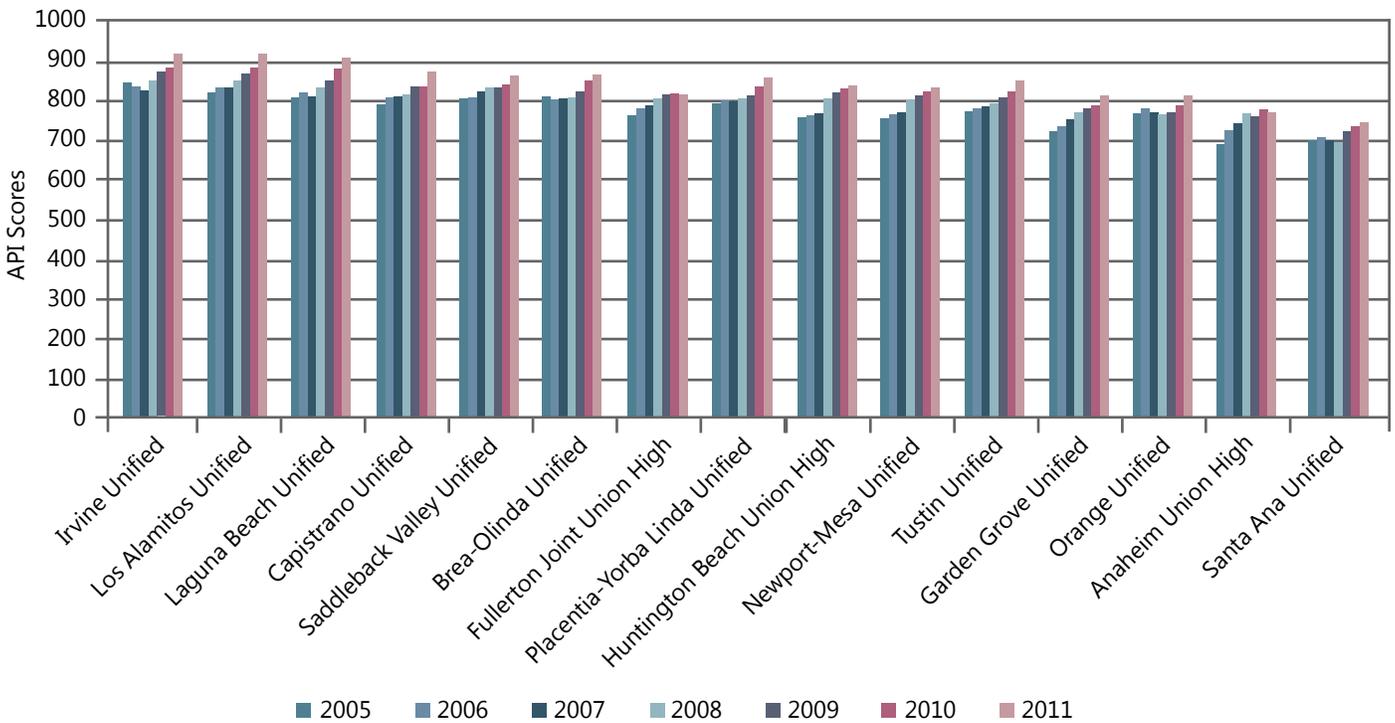
**Orange County Average API Scores for 2005-2011**



**FAST FACT** | While Orange County's average **API scores have improved**, individual school districts have also shown improvement with the **Garden Grove and Orange School Districts** finally attaining the **statewide performance target of 800**.

Source: California Department Of Education, Educational Demographics Unit

**Orange County Average API Scores by District, 2005-2011**

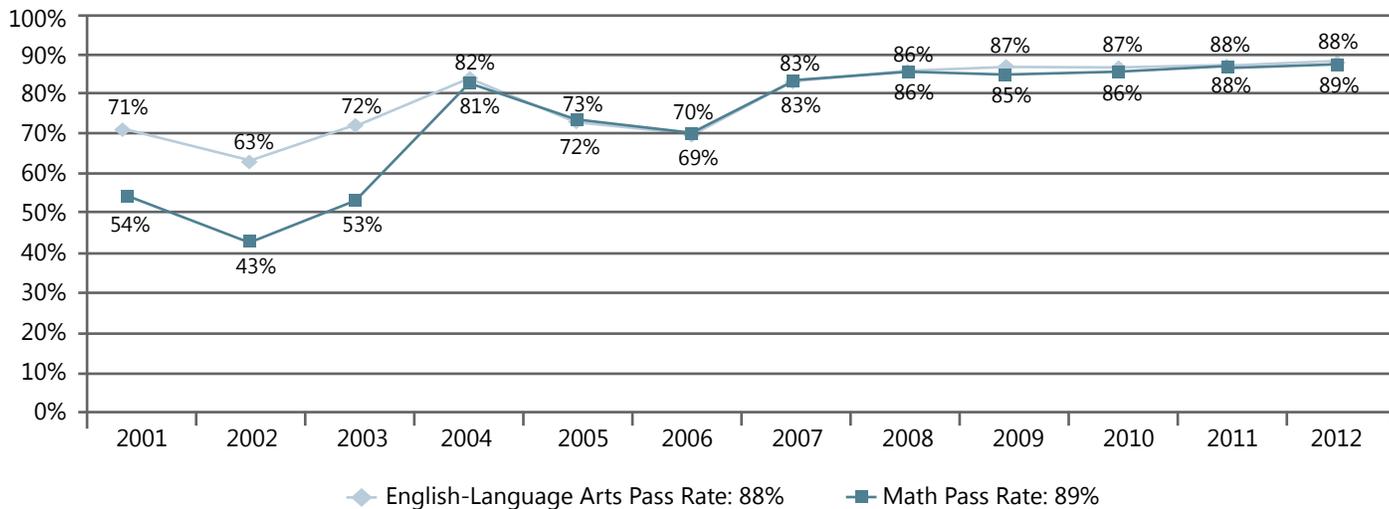


Source: California Department Of Education, Educational Demographics Unit

**HIGH SCHOOL EXIT EXAM PERFORMANCE >>** Orange County high school students are required to take the High School Exit Exam in order to graduate. Exit exams provide another tool in measuring cumulative student achievement. As of 2012, Orange County high schools students had an exam pass rate of 88 percent for english language arts and 89 percent for mathematics. These are the highest rates experienced for both subjects, and exceed the state pass rates of 83 percent for english language arts and 84 percent for mathematics.

Santa Ana Unified School District's High School Exit Exam pass rates are the lowest in the county and lower than statewide rates. While pass rates for Santa Ana schools have experienced an absolute increase in recent years, they are still well below average county rates and those of neighboring school districts.

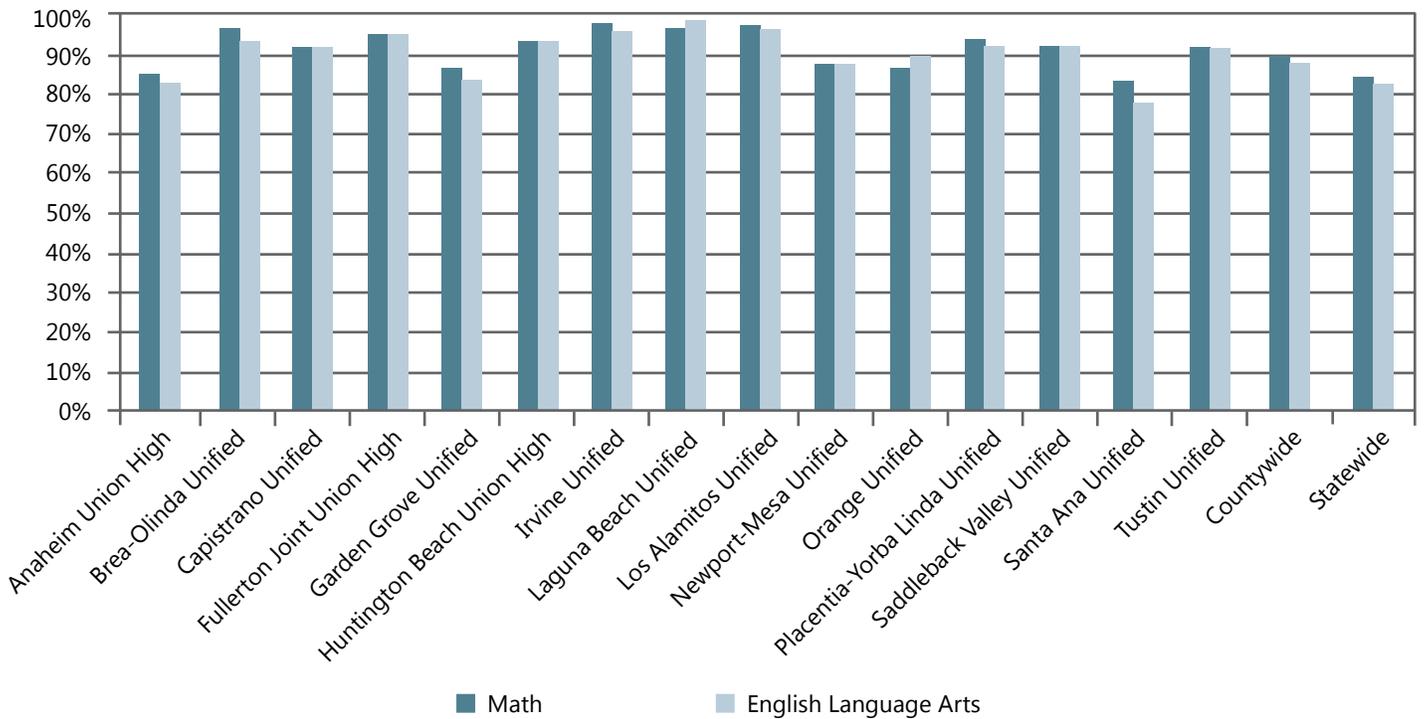
**Orange County Grade 10 High School Exit Exam Trend, 2001-2012**



Source: California Department Of Education, Educational Demographics Unit

**FAST FACT** | Every school district in Orange County **outperformed the state averages** for both math and english language arts **except for Santa Ana Unified** which posted exit exam pass rates of **78%** for english language arts and **83%** for math, and **Anaheim Union High** which had the same pass rate as the state in math and a lower pass rate in english language arts at **82%**.

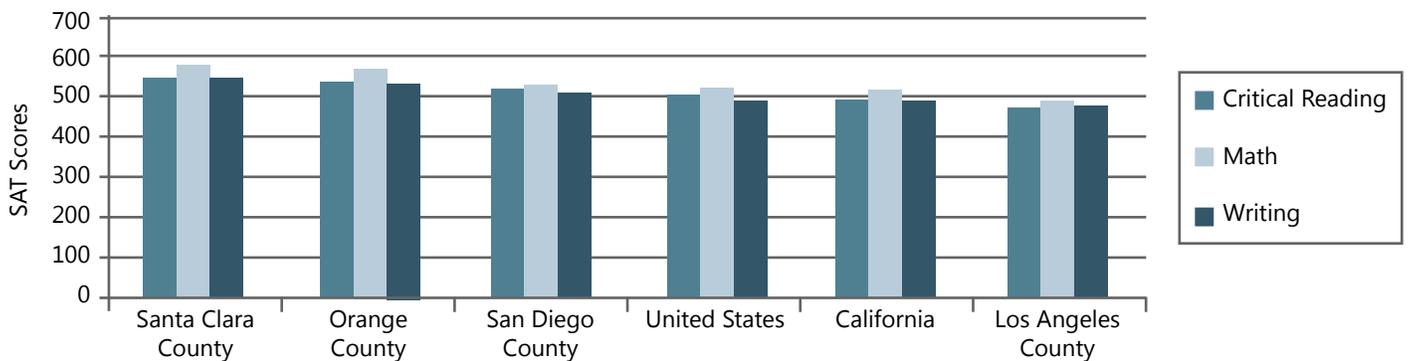
### Grade 10 High School Exit Exam Pass Rate by District, 2011-2012



Source: California Department Of Education, Educational Demographics Unit

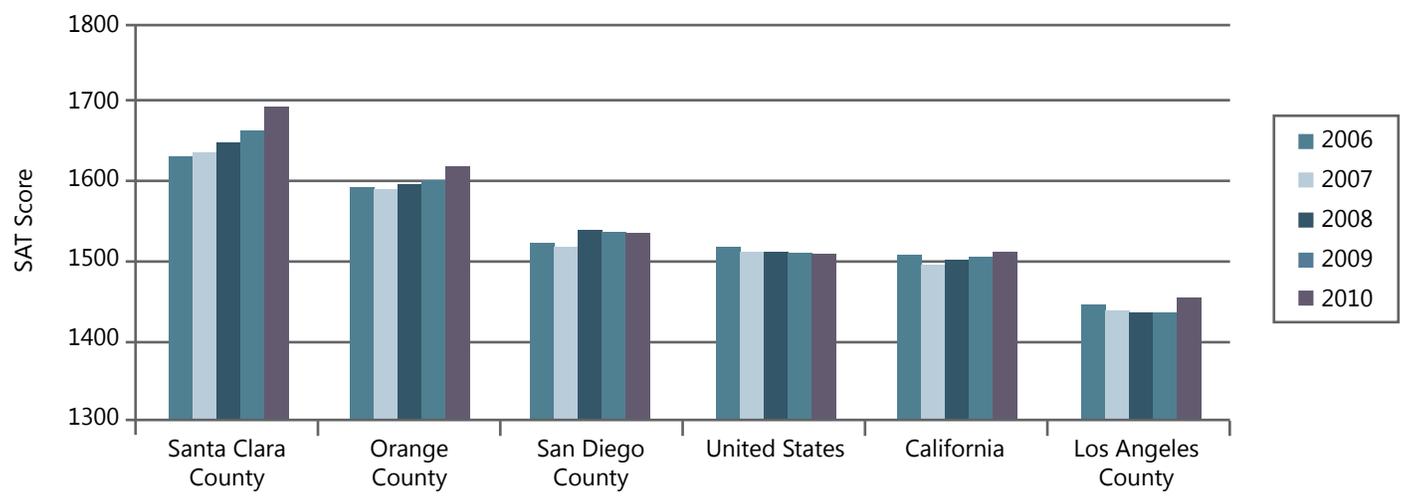
**SAT PERFORMANCE >>** With the exception of Santa Clara County, Orange County scored better on the SAT than peer counties, the state, and the nation. Orange County’s cumulative average SAT score in 2010 was 1,616—well above the state and national averages of 1,512 and 1,509 respectively. Among peers, only Santa Clara County scored higher with an average score of 1,692. Additionally, Orange County 2010 SAT performance grew 16 points year-over-year, while most other counties were flat except for Santa Clara County, which experienced a 31-point increase. Additionally, Orange County’s math SAT score is higher than other counties, except again for Santa Clara County.

### 2010 SAT Scores by Subject



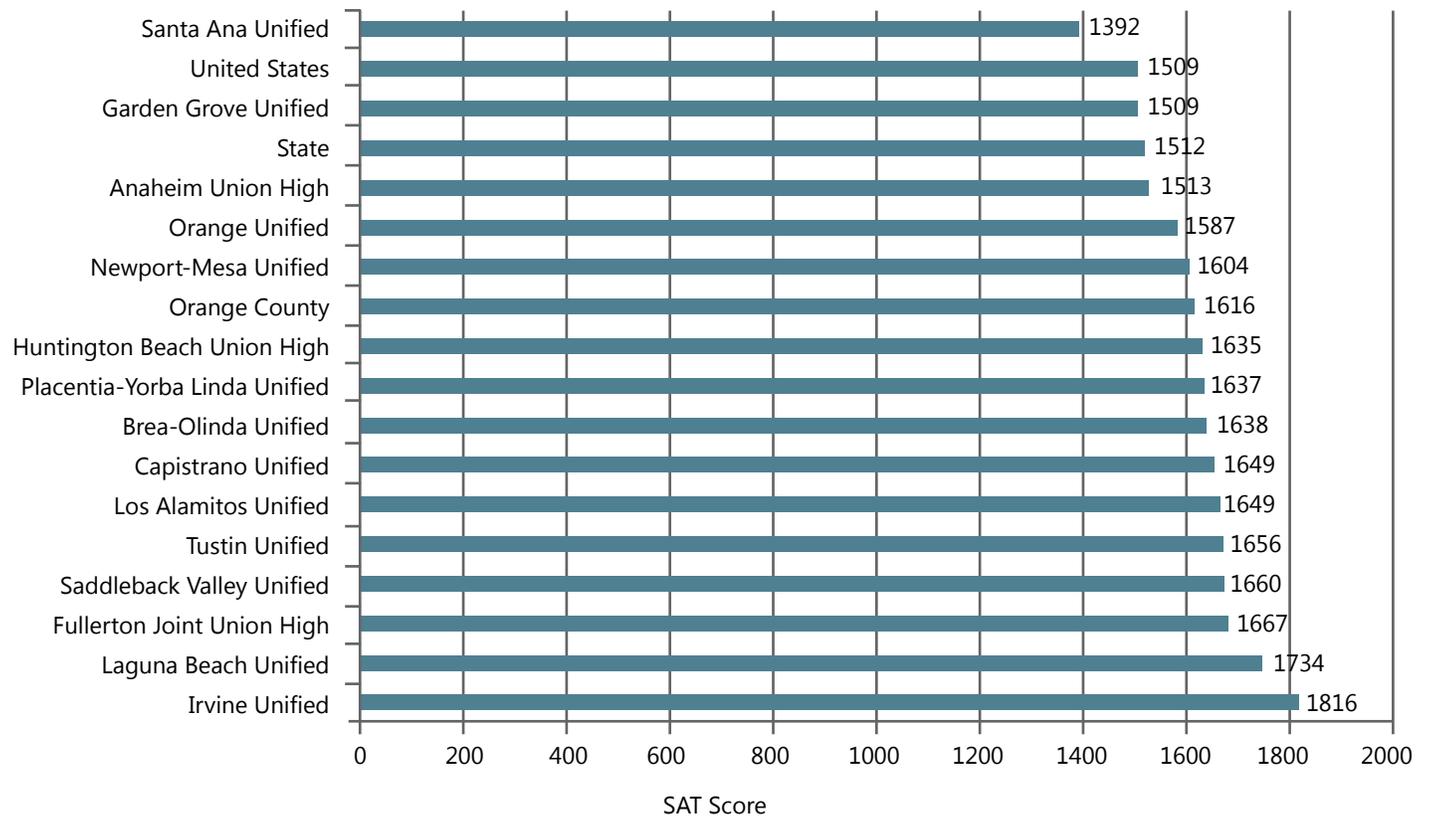
Source: California Department of Education, Educational Demographics Unit

### Regional SAT Scores, 2006-2010



Source: California Department of Education, Educational Demographics Unit

### Average Total SAT Scores by District, 2010



Source: California Department of Education, Educational Demographics Unit

In terms of SAT scores by school district, Orange County has some of the best performing districts in the state, but there is also great variation within the county. Irvine Unified had the highest overall SAT scores with an average of 1,816, followed by Laguna Beach Unified at 1,734. By comparison, the average SAT at the national level is 1,509 and 1,512 at the state level. The lowest SAT scores of Orange County school districts were in Santa Ana (1,392) and Garden Grove (1,509).

# ENGLISH LEARNERS

English fluency trends in Orange County need to advance more rapidly, ensuring students can achieve greater educational outcomes and are prepared for the workplace.

## WHY IS THIS AN ISSUE?

Language barriers pose significant hardships for students in both the learning process and the workplace. As future job markets become increasingly competitive, it will be critical for Orange County to support the development and improvement of English fluency programs. This will be particularly important in communities with larger immigrant populations. Without this focus, these communities may continue to experience lower wages and poor business growth. Students who do not speak, read, or write English fluently face serious limitations in Orange County's current and future job markets, making it crucial that improved English fluency programs be instituted to support a student population who will make up the majority of the future workforce. If not, the county will fail to provide local businesses with a qualified workforce, which will ultimately start a domino effect resulting in overall lower wages and a decreased quality of life for Orange County residents.

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

Orange County must focus on improving English fluency among student populations to ensure that these students are prepared for higher education and the workplace. Orange County's percentage of English language learners, which is at 27 percent, continues to be the highest among the state and neighboring counties. While this represents a decrease from the previous years (28.2 percent), it is still more than two percent higher than the next closest county, and almost four percent higher than the state. Over the last decade Orange County has seen an overall positive trend of students designated as "fluent English proficient," although there was a small dip in 2011.

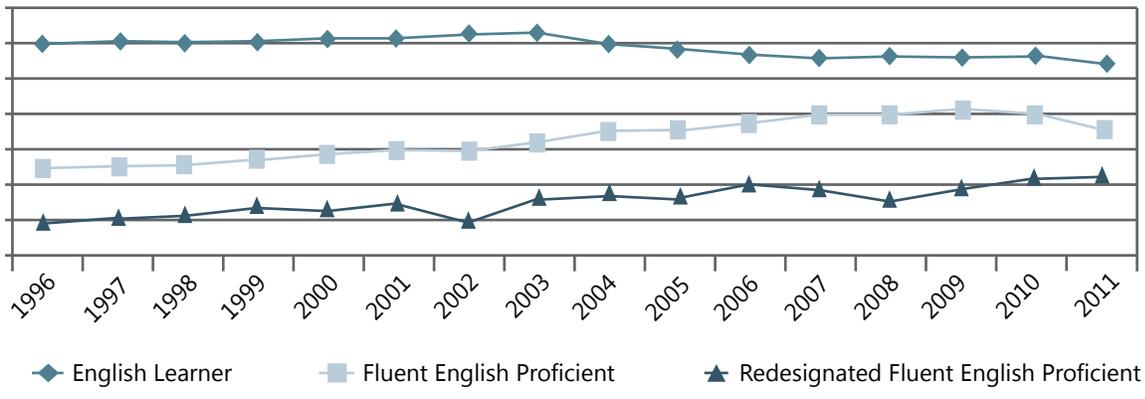


English Learners as Percent of Total Enrollment, 2010-2011



Source: California Department of Education, Educational Demographics Unit

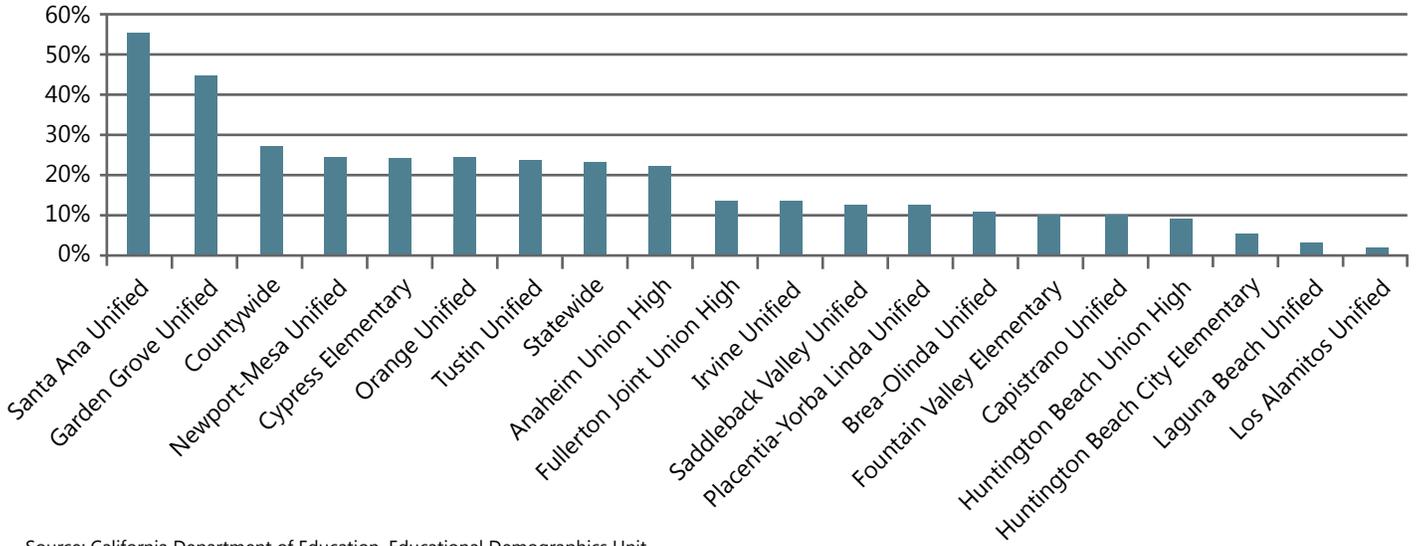
### Orange County English Language Learners, 1996-2011



Source: California Department of Education, Educational Demographics Unit

From 2010 to 2011, Santa Ana had the highest percentage of English Learners compared to other districts in Orange County at 54.8 percent, followed by Garden Grove with 43.3 percent—both lower than the previous year, but still substantially higher than the county average of 27 percent.

### Percent of English Learners by District, 2010-2011



Source: California Department of Education, Educational Demographics Unit

**SUPPLEMENTAL INFORMATION >>** English 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 and including literacy (grades 3-12 only)—have been determined to lack the clearly defined English language skills of listening comprehension, speaking, reading and writing necessary to succeed in the school’s regular instructional programs.

Fluent English Proficient (FEP) students are those who reported a primary language other than English but met the district criteria for determining proficiency in English—i.e., those student who were identified as FEP (Fluent English Proficient) on initial identification and students re-designated from Limited-English-Proficient (LEP) or English Learner (EL) to FEP. Re-designated Fluent to English Proficient students are the percent of students re-designated from English Learners to Fluent English Proficient status since the last count of English proficiency of students which is determined on an annual basis.

# DROPOUT RATES

Ensuring Orange County dropout rates continue to decline should be a key priority in order to ensure a prepared workforce for the future.

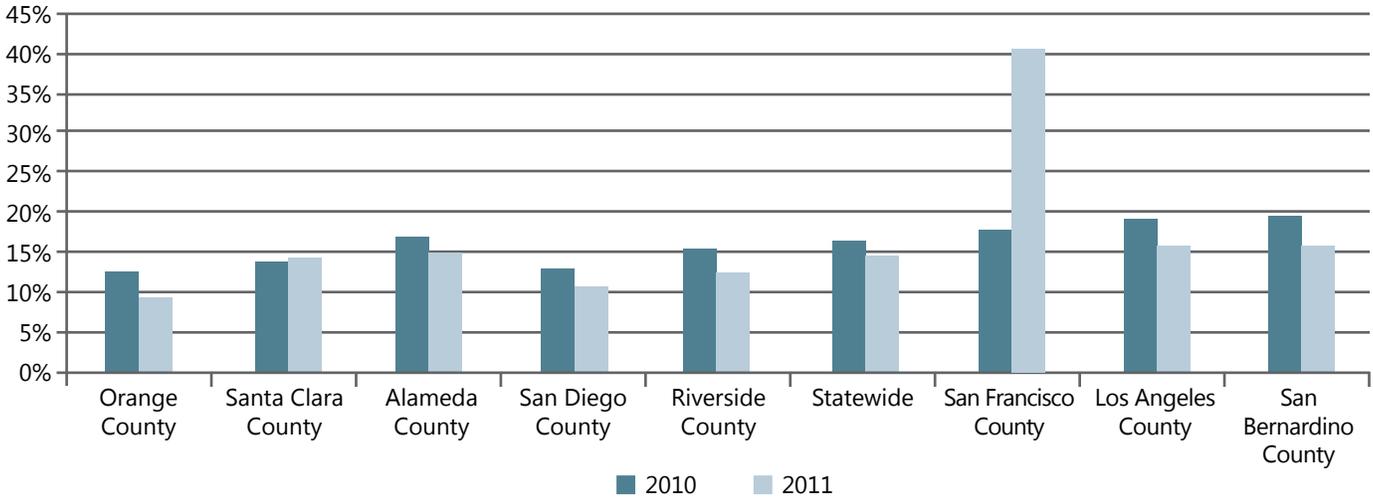
## WHY IS THIS AN ISSUE?

The dropout rate not only represents the number of people who have dropped out of school, but also the potential number of people who have been added to the poorly educated segment of the population. While Orange County has low student dropout rates, it is still an issue that should be addressed on a constant basis. Many Orange County schools are recognized as being amongst the best in the state due to their commitment to academic excellence. However, students continue to drop out for a variety of reasons; the most prevalent reason is that students have lost overall interest and may not realize the substantial benefits associated with education. Thus, the county should focus on the implementation of programs and policies aimed at communicating the importance of education, not only at financial levels but also for social dynamics.

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

In comparison to the state and neighboring counties, Orange County had the lowest dropout rate in 2011 at 9.3 percent, which represents a more than 24 percent decrease in the dropout rate from the previous year. The next closest counties were San Diego County (10.9 percent) and Riverside County (12.4 percent). While Orange County's overall dropout rate has fallen into single digits, dropout rates continue to be significantly higher for some populations including English Language Learners, the socioeconomically disadvantaged, and minority populations.

### Grades 9-12 Adjusted Four-Year Derived Drop-Out Rate



Source: California Department of Education, Educational Demographics Unit

# HIGH TECH-RELATED DEGREES

With the fast growth of high-tech clusters in Orange County, future high-wage job opportunities will be primarily located in the high-tech industry. Ensuring that the future workforce is properly educated in the STEM disciplines (science, technology, engineering and math) is a crucial first step in establishing economic sustainability for Orange County individuals and communities.

## WHY IS THIS AN ISSUE?

Orange County has a long history of science and technology-based businesses, beginning with the large presence of aerospace companies, which took advantage of the county's large, well-educated workforce in the 1960s and 1970s. With the emergence of many computer chip, circuit board, and microprocessor manufacturing companies, Orange County became known for its high-tech workforce and high-wage job market. This reputation for excellence in the STEM fields attracted even more technology-based businesses and high-skill residents to the county. With increasing global competition, keeping Orange County's competitive edge in the STEM disciplines is more important than ever for the continued economic success of the region.

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

Following a slight drop in 2008, the number of STEM related undergraduate degrees awarded by Orange County increased over the past two years, with an 8.5 percent increase in 2009 and a 7.0 percent increase in 2010. Since 2004, the majors that have had the highest growth are physical sciences with 106 percent growth and biological sciences with 64 percent growth. Information and computer science undergraduate degrees were the only undergraduate disciplines to experience a decline since 2004, with a 60 percent decrease. Among the graduate degrees awarded, the largest growth occurred in the engineering and math disciplines, which experienced a 57.8 percent and 72 percent increase, respectively. Overall, STEM degrees amounted to 17.7 percent of all degrees awarded from 2009-2010. While STEM degrees are increasing steadily, the rate of increase continues to be outpaced by the rate of Orange County employers' need for even greater numbers of STEM workforce.

Discipline	2010		2004-2010 % Changes	
	Bachelor Degrees Granted	Graduate Degrees Granted	Bachelor Degree Change	Graduate Degree Change
Biological Sciences	1,151	35	64%	20.7%
Engineering	592	404	29%	57.8%
Information and Computer Sciences	215	108	-60%	28.2%
Physical Sciences	278	150	106%	-0.09%
Math	127	43	31%	72%
<b>Total</b>	<b>2,363</b>	<b>740</b>	<b>22.8%</b>	<b>38.1%</b>

### Tech-Related Degrees Granted, 2000-2010



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

#### FAST FACT

*STEM (science, technology, engineering, and math) degrees amounted to **17.7% of all degrees awarded** from 2009-2010. While STEM degrees are increasing steadily, the rate of increase continues to be **outpaced by the rate of Orange County employers' need** for even greater numbers of STEM workforce.*





# WORKFORCE HOUSING



2012/2013

# WORKFORCE HOUSING

In order to ensure housing options for Orange County's workforce, housing development must reflect projected employment trends and related workforce income levels.

## WHY IS THIS AN ISSUE?

Through an understanding of current and projected market trends of housing prices, rental rates, incomes and affordability, Orange County policymakers and leaders can make educated decisions about workforce housing programs that address the most pressing housing needs in the region.

Despite a deep and prolonged downturn in housing activity and values, Orange County's housing costs—including apartment rental rates—are higher than those of neighboring counties, peer regions and the national average. As highlighted in other sections of this report, many occupations projected to experience high job growth provide relatively low wages. Increasing the supply and availability of workforce housing options has become increasingly important following the Great Recession's negative impact on wage, income and household wealth trends.

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

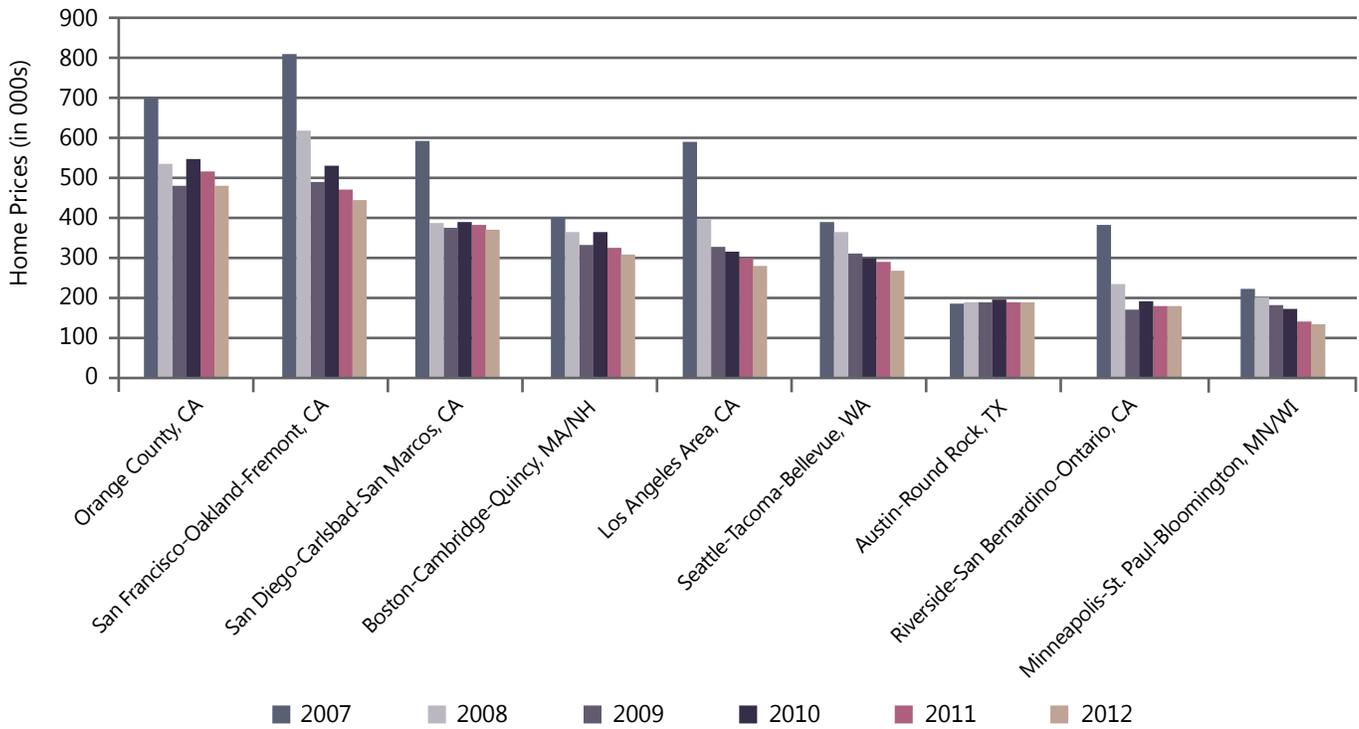
Orange County has long been one of the most expensive places in the country for housing. Even with the recent collapse of real estate prices, the region's home purchase prices are among the highest in the nation. Similarly, the average rents are high compared to rental housing in most other peer regions.

**HOME OWNERSHIP** >> According to the California Association of Realtors (CAR), 60.8 percent of Orange County units are owner-occupied, with the remaining 39.2 percent being renter-occupied units. In June 2012, the Orange County median price of an existing single-family detached home was \$567,910—up 5.5 percent from May 2012 when the median price was \$538,340, and further up 6.2 percent from the June 2011 median price of \$534,680. This indicates a sign of improvement from the real estate market as property values continue to slowly regain their position after falling dramatically during the housing downturn.

CAR's Housing Affordability Index—First-Time Buyer measures the percentage of households that can afford to purchase an entry-level home. CAR considers this index to be the most fundamental measure of housing well-being for first-time buyers. As of the first quarter of 2012, CAR estimates Orange County to be 62, up from 57 in 2011. This means 62 percent of Orange County households can afford to purchase an entry-level home, a much higher level of affordability than before the housing downturn. However, Orange County ranks poorly when compared to the Housing Affordability Indexes of California and the U.S. at 73 and 84, respectively.

Still, at \$412,130, the entry-level price of a home requires a minimum qualifying income of \$60,180 (as of the first quarter of 2012). Orange County's high cost of living decreases overall migration into the county and continues to push some residents out of the region. This is troubling because many residents, particularly young adults, cannot afford to buy a home, and this younger generation is an important part of Orange County's future workforce.

**Median Single-Family Home Price by Metropolitan Statistical Area, 2007-2012 Orange County vs. National Peers**



Source: National Association of Realtors\*

**RENTING IN ORANGE COUNTY >>** The Housing Wage—defined by the National Low Income Housing Coalition (NLIHC) to be the wage necessary to afford rental housing for specified family and employment situations—ranges from \$26.62 per hour for a one-bedroom apartment to \$44.95 per hour for a three-bedroom apartment in Orange County. These rates have increased since 2000 when Orange County’s housing wages ranged from \$15.23 per hour (one-bedroom apartment) to \$20.86 per hour (three-bedroom apartment). Since peaking in 2007-2008, Orange County rental rates have stabilized, fluctuating slightly up or down each year.

With the exception of San Francisco and San Jose, Orange County has performed better in terms of rental affordability than its counterparts over the past few years. Still, the hourly wage needed for a one-bedroom apartment (\$26.62) is equivalent to an annual income of \$55,370. The annual renter income needed to afford a two-bedroom apartment at fair market rent is 118 percent of median annual income, or \$66,082. At this level, 56 percent of Orange County renter households are not able to afford a two-bedroom apartment at fair market rent.

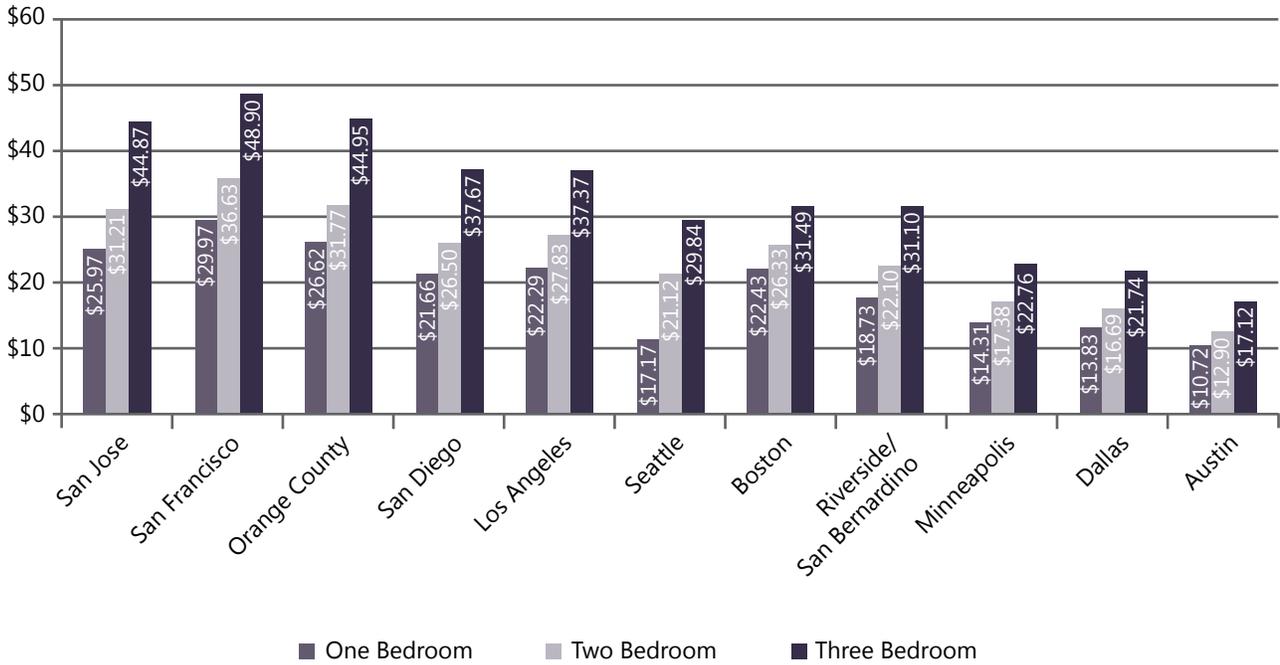
**Fair Market Monthly Rent in Orange County, 2003-2012**

Fair Market Rent	2003	2004	2005	2006	2007-08	2009	2010	2011	2012
One Bedroom	\$1,098	\$1,098	\$1,161	\$1,238	\$1,330	\$1,296	\$1,336	\$1,327	\$1,380
Two Bedroom	\$1,317	\$1,317	\$1,392	\$1,485	\$1,595	\$1,546	\$1,594	\$1,584	\$1,652
Three Bedroom	\$1,885	\$1,885	\$1,992	\$2,125	\$2,282	\$2,188	\$2,256	\$2,241	\$2,354
Estimated Orange County Median Family Income	\$74,200	\$74,200	\$75,700	\$78,300	\$84,100	\$86,100	\$87,200	\$84,200	\$85,300

Source: National Low Income Housing Coalition

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

## Hourly Wage Needed to Afford Fair Market Rent in 2012, Orange County vs. National Peers



Source: National Low Income Housing Coalition

### FAST FACT

The **hourly wage** needed to rent a **one-bedroom apartment** (\$26.62) is equivalent to an annual **income of \$55,370**. The annual income needed to afford a two-bedroom apartment is 118% of median annual income, or \$66,082. At this level, **56%** of Orange County renter households are **not able to afford a two-bedroom apartment**.



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