OC MODEL:
A Vision for Orange County's Future

CENTER FOR
DEMOGRAPHICS & POLICY
RESEARCH BRIEF
CHAPMAN UNIVERSITY

OC MODEL:

A Vision for Orange County's Future

CENTER FOR
DEMOGRAPHICS & POLICY
RESEARCH BRIEF

Co-authors:
Joel Kotkin and Marshall Toplansky

Lead researchers:
Wendell Cox and Ali Modarres

Chapman research team:
Nate Kaspi, Charlie Stephens,
Rachel Pierce, Robert Roussel

CHAPMAN
UNIVERSITY
PRESS

CHAPMAN UNIVERSITY

Center for Demographics and Policy

"Demographics is destiny" has become somewhat an overused phrase, but that does not reduce the critical importance of population trends to virtually every aspect of economic, social and political life. Concern over demographic trends has been heightened in recent years by several international trends —notably rapid aging, reduced fertility, large scale migration across borders. On the national level, shifts in attitude, generation and ethnicity have proven decisive in both the political realm and in the economic fortunes of regions and states.

The Center focuses research and analysis of global, national and regional demographic trends and also looks into policies that might produce favorable demographic results over time. In addition it involves Chapman students in demographic research under the supervision of the Center's senior staff. Students work with the Center's director and engage in research that will serve them well as they look to develop their careers in business, the social sciences and the arts. They have access to our advisory board, which includes distinguished Chapman faculty and major demographic scholars from across the country and the world.

The distinguished faculty of Wilkinson College of Arts, Humanities, and Social Sciences are composed of active scholars who are renowned nationally and internationally for their academic excellence and contribution to knowledge. But just as important, they are also enthusiastic teachers who take seriously their responsibility of ensuring that our students, whether majors, minors, or graduate students, are prepared for the intellectual, ethical, and professional challenges that a rapidly changing world is going to present. Our college is focused on providing a well-rounded educational foundation that lead to a variety of career paths.

ADDITIONAL RESEARCH CENTERS:

The **Earl Babbie Research Center** is dedicated to empowering students and faculty to apply a wide variety of qualitative and quantitative social research methods to conduct studies that address critical social, behavioral, economic and environmental problems. The Center's mission is to provide research support and instruction to students, faculty and the broader community, and to produce research that addresses global concerns including human rights, social justice, peaceful solutions to social conflicts and environmental sustainability. The Babbie Center supports cutting edge interdisciplinary research and encourages faculty student collaboration. For more information about the Earl Babbie Research Center.

The **Henley Social Science Research Lab** supports undergraduate and faculty research through a variety of programs. Research assistants staff the lab five days a week and can help faculty with the collection and analysis of date. They are also available to support students by providing tutoring in SPSS, GIS and quantitative methods for courses that include this content. The lab also encourages and facilitates interdisciplinary research with the creation of faculty work groups and serves as a resource for the community and can provide consulting services. The Henley lab is pleased to provide consulting for local government and community groups.

ACKNOWLEDGEMENTS

The authors wish to thank our sponsors, without whom this study would not have been possible. KPMG, LLP, Wells Fargo and Chase Properties contributed not only funding, but valuable perspectives and expertise that enriched the findings. Chapman University's A. Gary Anderson Center for Economic Research also played an important role in providing a macroeconomic "reality check" with the statistics it gathers on the state of the Orange County economy.

Finally, we wish to acknowledge our team of exceptionally talented student researchers. Comprised of both graduate and undergraduate students, the team brought a new level of depth to our statistical understanding of the county. They helped us appreciate, through fresh eyes, the rich tapestry of social and cultural innovation that is occurring in Orange County today.

Photo courtesy Orange County Archives

AUTHORS

Joel Kotkin is the RC Hobbs Presidential Fellow in urban futures at Chapman University and director of the Chapman Center for Demographics and Policy. He is also executive director of the Center for Opportunity Urbanism in Houston, Texas. Author of eight books, his most recent is *The Human City: Urbanism for the Rest of Us.*

Marshall Toplansky is Senior Advisor to Chapman University in the area of Data & Analytics, as well as adjunct faculty member at the Argyros School of Business and Economics. Formerly Managing Director of KPMG's national center of excellence in Data & Analytics, Marshall co-founded big data company Wise Window, a pioneer in analyzing social media, blogs and news stories to track and predict business and political trends. Marshall is Chairman of the Cicero Institute, a strategy and research institution in Salt Lake City, Utah. He is past Managing Director of the Harvard Business School Association of Orange County, and was elected to the Computing Industry Hall of Fame for his role in creating the industry's largest technical service certification program, A+, which has certified more than 3 million computer technicians worldwide.

Wendell Cox is a member of the advisory board of the Chapman University Center for Demographics and Policy a senior fellow at the Center for Opportunity Urbanism in Houston and the Frontier Centre for Public Policy in Canada. He was appointed to three terms on the Los Angeles County Transportation Commission, served on the Amtrak Reform Council and served as a visiting professor at the Conservatoire National des Arts et Metiers, a Paris university. He has a degree in government from California State University, Los Angeles and an MBA from Pepperdine University in Los Angeles.

Ali Modarres is the Director of Urban Studies at University of Washington Tacoma. He is a geographer and landscape architect, specializing in urban planning and policy. He has written extensively about social geography, transportation planning, and urban development issues in American cities.

TABLE OF CONTENTS

Photo courtesy Orange County Archives

Photo courtesy Orange County Archives

EXECUTIVE SUMMARY

Blessed by a great climate and a highly skilled workforce, Orange County should be at the forefront of creating high wage jobs. The fact that it is not should be a worrying sign to the area's business, academic, political and media leaders. Despite some signs of recovery in OC, long-term trends, such as a dependence on asset inflation and low wage employment, seem fundamentally incompatible with sustainable and enduring growth in the County.

To be sure, asset inflation benefits established property owners, and those who work in the real estate sector, but the surge in property prices and an ever increasing number of touristic venues does not provide enough of a viable base for coming generations. Given the area's high costs — which can at best be mollified — the area's prosperity depends on building up its cadre of well-paying high value jobs in promising fields as professional business services, technology and design-oriented cultural industries.

The good news: the county retains some strength in all these fields. But many long-term trends, as we will demonstrate below, are not encouraging. Once one of the nation's most powerful high-end economies, the county is in danger of losing momentum to other markets.

Reversing this trend will require a more holistic assessment of current realities. It also requires a strong, coherent strategy targeted to high-wage growth sectors. Instead of the current obsession with real estate and tourism projects, the County needs to focus more on what professional business services, technology, finance and science-based companies need in order to succeed.

This necessitates a conscious effort, led by the business community, to develop a strategic direction for Orange County. There are a number of models to choose from, ranging from the most successful, Silicon Valley to greater Boston to the North Carolina Research Triangle, and many more. In each case, the growth from established university research centers — Stanford, MIT, Harvard, as well as the University of North Carolina, Duke and North Carolina state — extended from the university's base to its periphery. This strong cooperation among universities, government and the private sector is critical to the emerging tech and business service corridor developing between the Texas cities of Austin and San Antonio.[1]

SO THE ISSUE BOILS DOWN TO: WHAT STRATEGY IS BEST FOR ORANGE COUNTY?

To date, there are two common errors when thinking about Orange County's future. One maintains that Orange County, rejecting the dispersed model suggested by its origins, ought to mimic Los Angeles (which, in turn, thinks IT should be mimicking San Francisco or New York) and become more "city like" — code for high density housing, mass transit and a centralized downtown. Although this strategy works in older, downtown-centric "legacy cities", it has proven far less successful elsewhere. This is most evident in neighboring Los Angeles, OC's closest relative. The determined drive there to become "city-like" may have benefitted some, such as developers and beneficiaries of public contracts, but has demonstrably failed to improve economic conditions across the metropolis.

The second error lies with the assumption that high end jobs will come automatically, without the private and public sector getting together to develop, fund and execute a strategy. Every successful jobs magnet — such as San Francisco, New York, Dallas-Ft. Worth and Seattle — position their economies in a way to market their appeal to the outside world.[2]

By comparison, the track record of providing help to potential and existing businesses in Orange County is mixed. The kind of hands-on services for businesses who relocate to the area seem paltry compared to what we see in other competitive regions.[3]

There seems to be little focus on recruiting new businesses to the area, as we see among more successful regions. Ultimately, to succeed and create the high wage jobs, there needs to be some form of civic vision and strength of will embraced by the business community, non-profit institutions as well as appropriate government agencies.

BUILDING THE OC MODEL

To understand the future of the OC, we first must comprehend its unique evolution. The earliest settlement — Mission San Juan Capistrano —dates back to 1776, but virtually all the urban growth of the region came much later. The region's early towns — Anaheim, Fullerton, Orange, San Juan Capistrano and Santa Ana — were largely agricultural settlements. The oldest large town, Anaheim, was founded by German settlers in 1857, who transformed the area into a major wine producer and developed the citrus industry that became so critical to the county's early growth.[4]

Similarly, the city of Orange, incorporated in 1888, began as an agricultural settlement, and boomed with the arrival of the Southern Pacific Railroad. It was built around its distinctive plaza, and Chapman University, which was originally founded in 1861 by the Disciples of Christ, as Hesperian College. Notably, the college admitted men, women, and people of color from the beginning. Santa Ana, once part of the vast Yorba Rancho, was established in 1886, and developed into a rail hub for Santa Fe railroad and later the administrative center for the county. Similarly, Fullerton grew as an agricultural outpost along the Santa Fe line. [5]

After 1920, Orange County enjoyed something of an oil boom, centered around Huntington Beach. Yet, still in 1950, no OC city had a population greater than 50,000.[6] Orange County remained very much a backwater, highly conservative and overwhelming Anglo, a far cry from the very diverse and politically varied place it is today. [7]

The second phase of the area's development focused on leisure. The coastal strip from Seal Beach to San Clemente has one of the most pleasant climates in the world. Vacation spots such as Newport Beach, San Clemente and Laguna Beach developed in the 20s and 30s. All were located too far from any work sites to attract commuters.

The region's leading leisure destination, Disneyland, notes historian Kevin Starr. Two critical elements of its "paradigm of value" were a faith that "urban environments could be deliberately created and orchestrated to incorporate regional and related corporate values." "Those values were not those of the big city, Starr notes, but were of "a more intimate America – small town America" that many feared had been lost elsewhere in Southern California." [8]

This model, at least ideationally, fit OC's dispersed development pattern, which from the imaginations of developers would emerge as a series of smaller towns. Linked initially to Los Angeles, "itself a pioneer of multi-polar development", OC's urban evolution came not so much from expanding centers, but out amidst farmsteads and open spaces. In 1991, scholars Rob Kling, Spencer Olin, and Mark Poster described this pattern as "post-suburban" — a "decentralized, multi-centered area" — neither city nor traditional suburb. As scholars M. Gottdiener and George Kephart noted, the OC's very pattern of development put "into question the mainstream urbanist's concept of central-city dominance." [9]

The "post-suburban" growth pattern has long offended mainstream urbanists. UCLA's Alan Scott blamed the lack of a dense center as causing "a sense of geographic amorphousness." [10] Yet for decades, both people and companies flocked to the region, led by aerospace companies seeking more space and cheaper land. In the 1970's and 1980's, business services, information and finance followed, and remain critical to the county's current and, more importantly, future economy. Two major public universities — the University of California at Irvine and Cal State Fullerton — added both to its payroll and attractiveness. Real estate lending and data services, along with some innovative technology and healthcare companies soon established themselves in the various employment centers in the county. [11]

But the more remarkable story was demographic. OC grew rapidly both in population and on an enormous scale. Between 1950 and 2010 Orange County's population grew 13 times, or an amazing 1,300 percent. It added more residents over that period than all but three counties in the nation, Los Angeles, Maricopa (Phoenix) and Harris (Houston).

OC's appeal to both companies and people was magnetic. Many of the planning mistakes experienced by Los Angeles — notably the lack of an extensive park network were avoided, particularly in the newer parts of Orange County.

Urban Los Angeles has 9.4 acres of Parks and Recreation areas per 1,000 residents; while in comparison, newer cities, such as Irvine, has 37 acres per 1,000 residents, meaning that over 20% of the city's land is dedicated to parks. The average for high density cities in the U.S. stands at around 7.1 acres per 1,000 residents. [12]

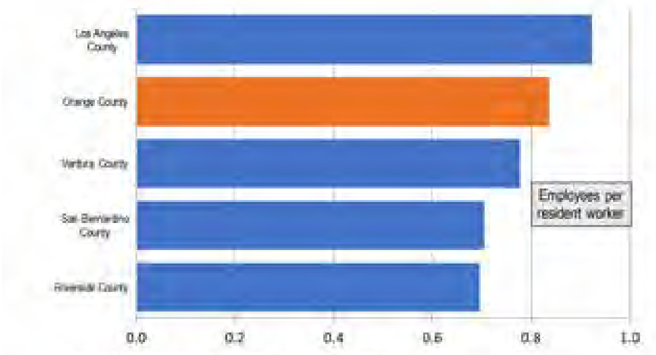
Master planned developments, notes urban scholar Bill Fulton, grew not just in size but sophistication. The developers of Irvine, Mission Viejo and Tustin layered commercial and residential development, to create a "great life", with their own retail and commercial concentrations.[13]

Looking back, Ray Watson, the former President of Irvine suggested:

"…we started with the desire not to replicate the endless sprawl that had characterized most of southern California's growth but rather produce mixed use communities whose scale and identifiable form was evident to those who lived and worked there." [14]

This pattern of development helped forge an economy increasingly self-sufficient and independent from Los Angeles. Indeed, as early as 1980, 72.1% percent of OC residents worked in the County; by the late 2000s that number climbed to 83.7 percent.

EMPLOYEE TO RESIDENT WORKER RATIO



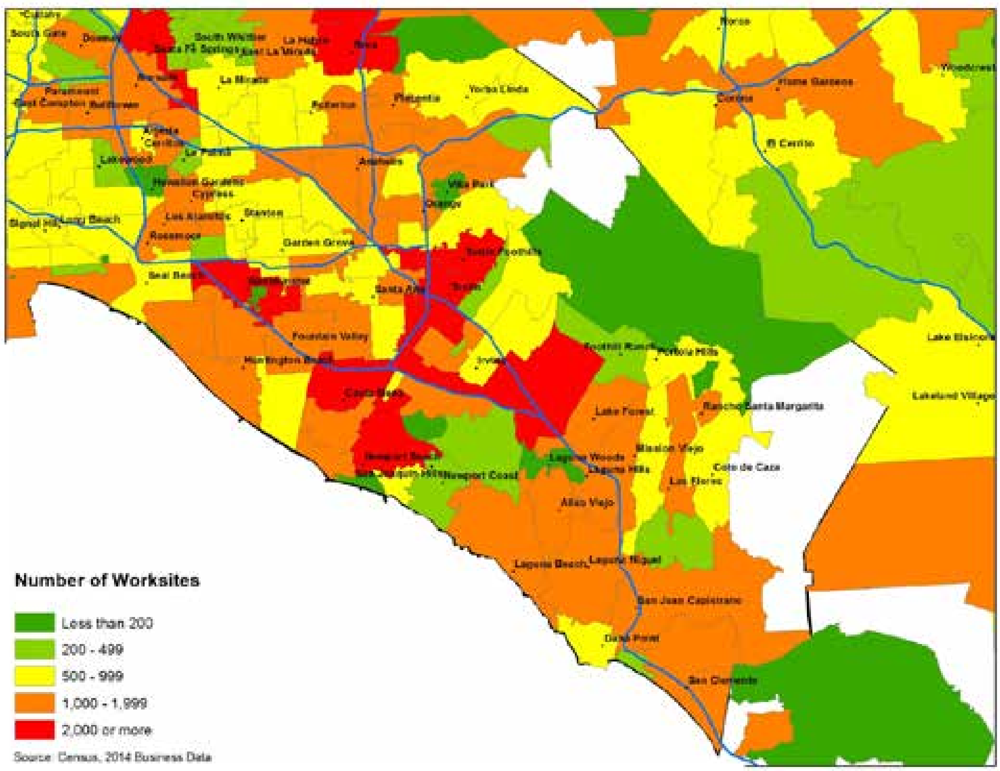
Derived from American Community Survey: 2006-2010

Overall, OC has an employee-to-resident worker ratio close to that of Los Angeles, a sure sign of the area's economic maturation.

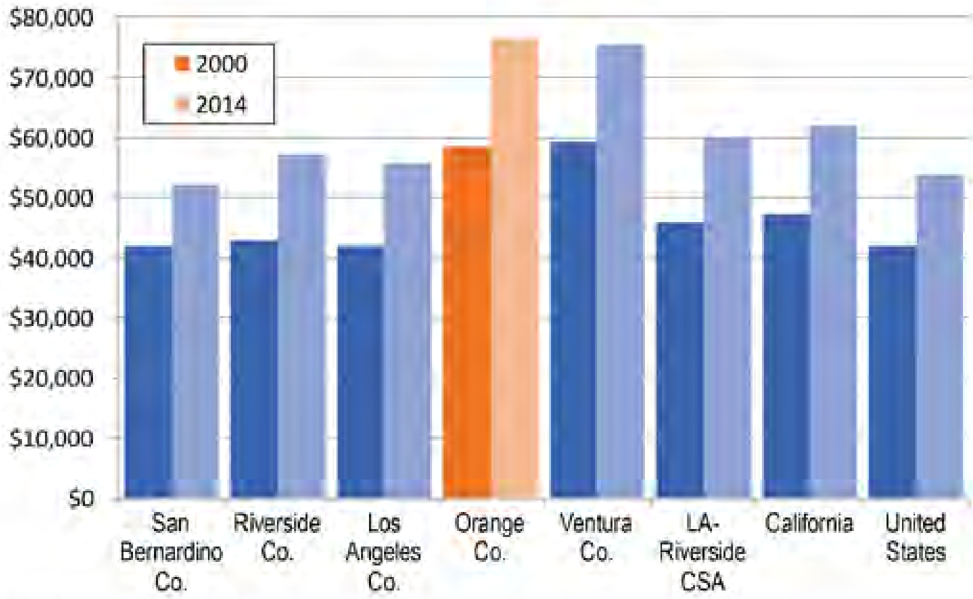
As the county became more self-sufficient in terms of jobs its employment base also continued to disperse. The John Wayne Airport, and the Costa Mesa-Santa Ana corridor, the area adjacent to the Airport, has become the fourth largest business district in California, employing 164,000 people, behind Silicon Valley (374,000), downtown San Francisco (297,000), Central & I-5 South Los Angeles (216,000) and the South Bay-Los Angeles (203,000) Corridors. But beyond the Irvine/John Wayne Airport nexus, there are major concentrations of over 40,000 employees and over 2,000 worksites in Newport Beach, Anaheim, Costa Mesa, Tustin, Brea and the area around the Y where the 5 and 405 meet.

THE MAKING OF AN ECONOMIC POWERHOUSE

Orange County built a powerful economy based on its "post-suburban" model. In the 70s, 80s, and 90s Orange County outperformed not only the nation and the state of California, but more than tripled the job creation rate of neighboring Los Angeles.



MEDIAN HOUSEHOLD INCOME



US Census Bureau data

The Center for Economic Research at Chapman University estimates the 2016 Gross County Product (the county equivalent of GDP) at $223.2 billion. If the OC were an independent country, it would rank #45 among world economies, roughly the size of Finland. It has greater economic output than Portugal, Greece and the Czech Republic. LA County would be the 20th largest economy if it were an independent nation. The 5- County region based around LA represents the 16th largest economy, or roughly the size of the entire Mexican economy.

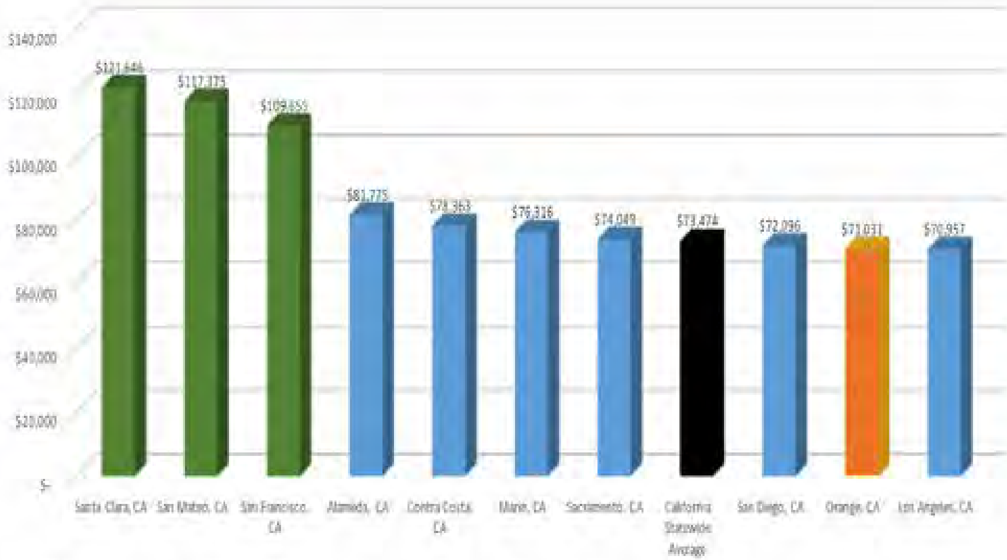
OC's unemployment rate also has been consistently lower than LA County's, averaging 4.5% in 2016 compared to LA's estimated 6.6%. OC was also historically able to attract more than its share of high value, higher wage professions. OC residents, as a result, enjoyed higher incomes as well; overall Orange County possesses the highest household incomes in Southern California, slightly outperforming even more suburban Ventura, and far surpassing the Inland Empire, Los Angeles, California and the nation. Not surprisingly, then, the median house price of OC homes, as of May 2016, is $735,000 versus $458,000 in Los Angeles County, a 68% premium

THE HIGH-COST/HIGH WAGE CHALLENGE

Today, Orange County still outperforms the national average in a host of key, high paid professions — notably manufacturing, professional and business services, finance and insurance — and holds its own in many others. This has allowed Orange County to remain, in the words Starr, "ground zero for suburban upward mobility in Southern California". [15]

Unfortunately, this reality is beginning to fray. Its position seems increas-

AVERAGE WAGES in Silicon Valley and San Francisco are between 53% and 70% higher than those paid in Orange County in 2014



Source: U.S. Depart of Commerce, Bureau of Economic Analysis, *Compensation of Employees by NAICS Industry, 2014*

ingly tenuous as we look at the data. A recent economic report led by Chapman University's Jim Doti indicates that Orange County has lost 16.3 percent of high paying information jobs since the beginning of the recession (Q4, 2007), versus an increase of 4.0 percent for California as a whole. For all high-paying job categories, Orange County has lost 1.6 percent of its jobs in the same time period, versus a 4.6 percent growth for the state.

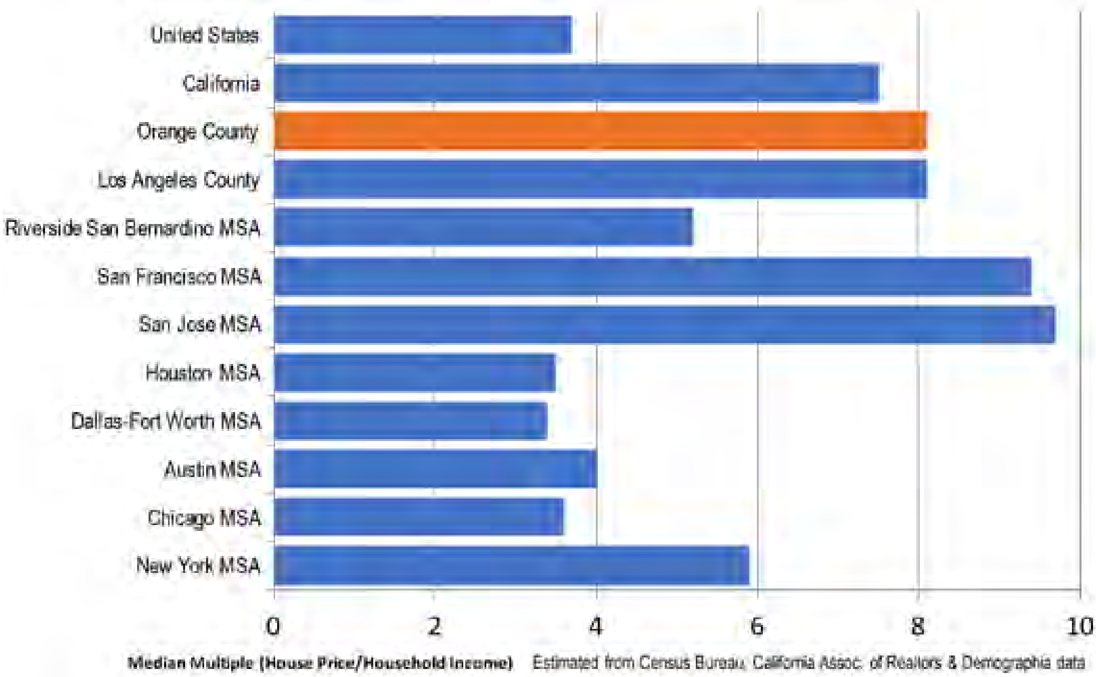
This erosion in competitiveness in high wage industries is already having a significant impact on personal income. Statewide, personal income has grown by 33.8 percent since the start of the recession. In Orange County, that growth has only been 26.7 percent. Critically, overall tech sector employment (regardless of wage) in Orange County has declined since 1990, with 12,000 fewer tech jobs today than it had in 1990. [16]

Over the past nine years, this pattern has continued as the county has lost jobs in such critical higher wage fields as information, manufacturing, and financial activities, while gaining in lower wage fields such as leisure and hospitality, education and health services. Professional and business service growth has been meager, as we will show below, compared to both other high-cost and many rising, lower cost regions.

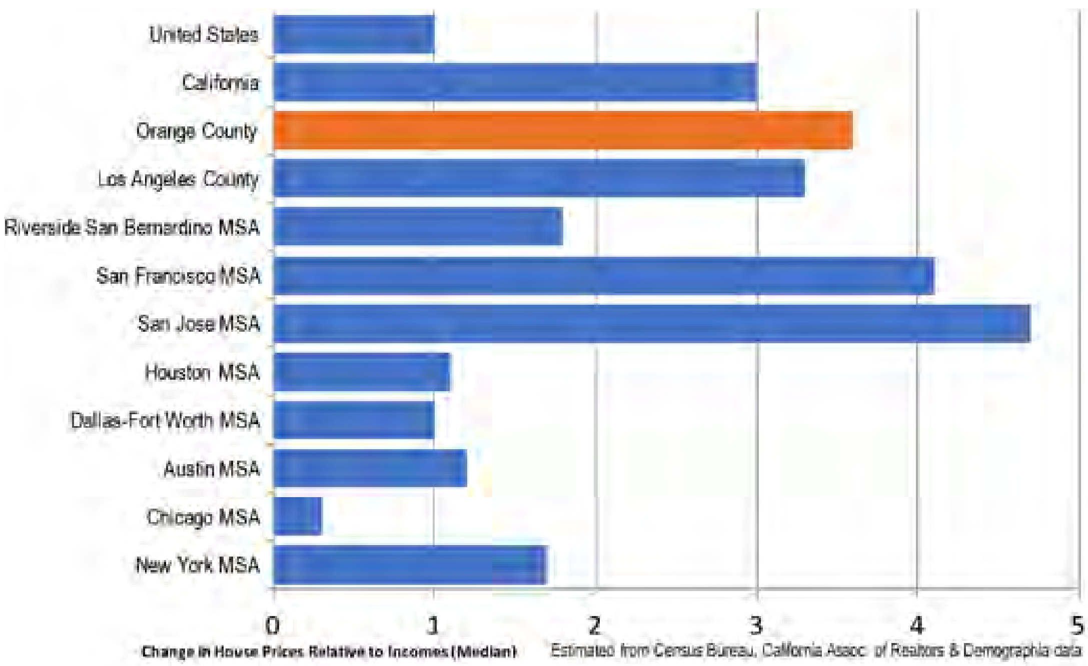
Overall, our economy is becoming far too dependent on low wage jobs and on activities like real estate and rental leasing, which employs 50 percent more people per capita than the national average. The over representation of real estate in the economy, as we will discuss, has profound implications for future job development, demographics and inequality.

The critical problem: our high property prices have been rising at a time of relatively modest income gains and low

HOUSING AFFORDABILITY:
Median Multiple - *Orange County in context*



HOUSE PRICE INCREASES & INCOME
Orange County in context: 2000 – 2015



growth in high wage employment. Outside of the Bay Area, OC now has some of the highest housing prices, compared to incomes, in the country.

Overall, unlike the Bay Area, OC wages do not appear to go nearly as far in compensating for the extraordinarily higher costs. To attract the best talent and to sustain their competitive advantages, high costs have to be compensated largely by higher salaries. The finance industry in Manhattan, for instance, pays an average of $323,653 per year. That is more than three times the salary that an Orange County counterpart receives. Similarly, Silicon Valley salaries are 73% higher than the average wage in California. Orange County's wages are slightly below the California average (which is skewed by the Bay Area). While housing costs in Silicon Valley are higher than they are in the OC, the higher wage somewhat compensates for that.

Yet OC's competition is not just from other high-priced economies. It must also cope with the rise of fast growing lower cost areas such as Texas and the Intermountain West. Orange County's housing prices are more than double those in metropolitan areas (adjusted for incomes), such as Dallas-Fort Worth, Houston and elsewhere — and the gap is getting worse.

This pattern presents an existential quandary for the region. Most of the growing areas — such as hospitality, education and low-end services — pay 3 to 5 times less than technology, professional business services and manufacturing positions, where the county is either stagnating or even losing ground.

OC'S CRITICAL TECH SECTOR

Tech jobs are critical because, as we see above, they pay more, and represent the likely future of the American high-end job market. In the race for such jobs, the OC is disadvantaged due to its lack of a substantial venture capital and incubation infrastructure. In Silicon Valley, San Diego and Boston, there is a formal system for generating and nurturing technology innovation. As smaller, idea-driven companies grow, it is easy for them to obtain growth capital and ultimately either become large themselves or be absorbed into the larger tech companies that then hire the people to execute. The major universities in those areas (notably Stanford and MIT) work closely with entrepreneurs, incubators and venture capital firms. In Orange County, that is not the case. U.C. Irvine (along with most other UC schools) — despite some promising recent efforts —is not considered to have a successful track record of moving the intellectual property created within the university environment over to the private sector to enable growth. As a result, the larger companies who feed on innovation from this system have less of a reason to locate in the OC

Consider the contrast with Silicon Valley. Y-Combinator, as an example, is a well-known incubator of early stage businesses in the Valley. Larger local companies, like Cisco, work closely with them to tailor their innovations to meet their needs. Having the innovators, the incubators and the acquirers in the same community creates significant value for Silicon Valley. This model, which focuses on the needs of the larger local companies, does not yet exist in Orange County.

Some might suggest that the OC is disadvantaged by millennial preferences for inner-city living. Yet this is a vast exaggeration, as we can see in the high-tech hotbed of the Bay Area. Although San Francisco proper has seen a significant boom in high-tech business services in recent years, the majority of the Bay Area's total employment remains more than 10 miles from the city. Neighboring San Mateo County still holds more than five times as many jobs in software publishing as San Francisco. The Bay Area's employment dispersal is even greater than the national average.

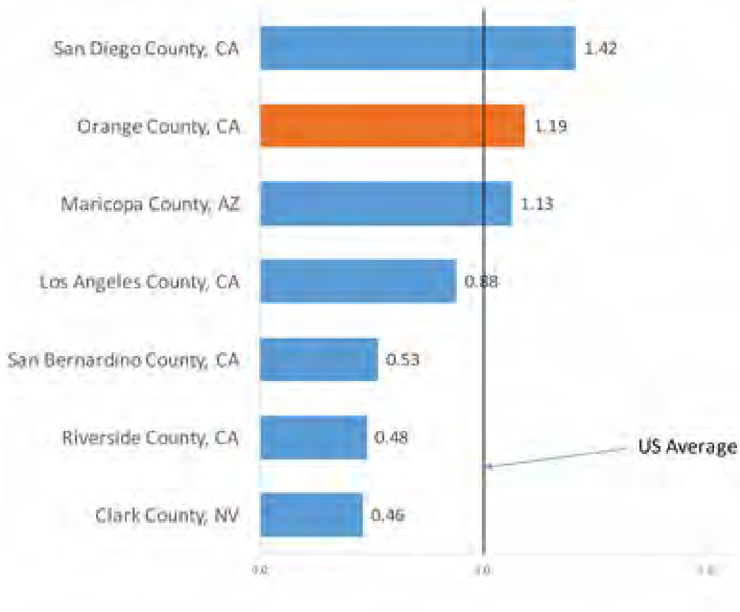
Nationwide STEM employment — jobs in science, technology, engineering or math — remains overwhelmingly in suburbanized areas with lower density development and little in the way of transit usage.

Urban areas as diverse and low density as Raleigh and Durham, North Carolina; Madison, Wisconsin; Denver; Detroit; Baltimore; and Colorado Springs are among the places with the highest shares of STEM jobs. [17]

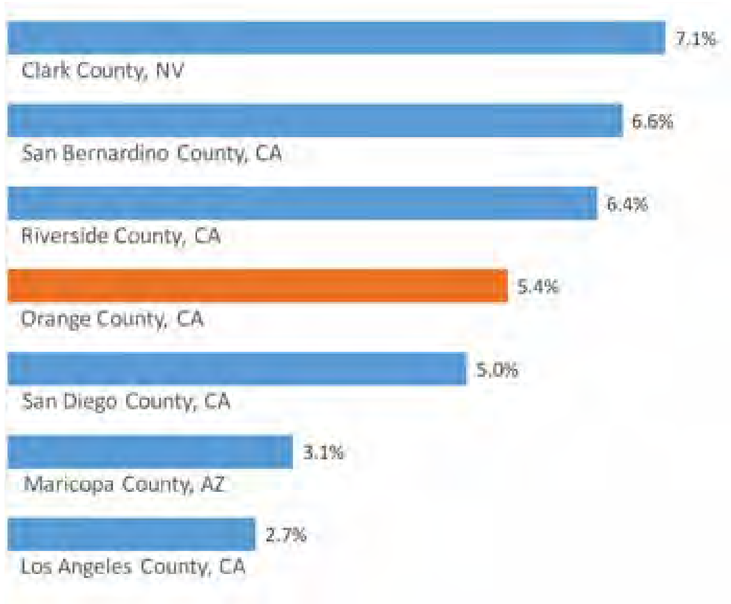
In southern California, the fastest growth in STEM employment has been in the Inland Empire, which starts from an admittedly low base. But of the coastal counties, Orange County has the strongest STEM job growth, expanding at twice the rate of LA County, despite all the considerable hype about the emergence of "Silicon Beach." [18]

Perhaps more important still, Orange County, along with San Diego, boast the highest concentrations of STEM jobs in the region, roughly twenty percent above the national average. In contrast, Los Angeles, in its aim to become more "urban", has seen its STEM job share drop well below the national average. Clearly, in southern California, at least, tech growth cannot be correlated with densification.

STEM JOBS: *2015 CONCENTRATION*



STEM JOBS GROWTH: *2013 – 2015*



TECH SECTOR: SIGNS OF WEAKNESS

Despite a strong base, OC's tech prowess has been gradually, but inexorably, diminishing over time. This is not a particularly good sign for the future.

This is especially troubling when we compare OC to other key competitive markets. To do this, we use a metric called a "location quotient", or an LQ. An LQ is a ratio that compares the sizes of industries in certain counties compared to the sizes of the same industries in the entire U.S. labor market. An LQ above 1 means that that area's concentration of tech employees is greater than the concentration of the same industry's employees in the entire U.S.

In terms of tech, we compared OC , depicted in dark red, to critical competitive regions such as Los Angeles, the Bay Area counties, Seattle, Austin, Boston, New York and Chicago. By this measurement, the tech LQ for Orange County has eroded, not as badly as Los Angeles, while key growth areas like Seattle, the Bay Area and Austin have increased their relative tech standing.

Particularly disturbing has been the decline in high tech services. This sector is increasingly important, and where the most rapid high-wage growth is taking place. The technology services area includes important functions within the information technology industry, such as infrastructure design, software design and quality testing and IT consulting. Its LQ ranks just 7th out of the 10 measured regions and lags far behind not just industry leaders in the Bay Area, but Seattle and Austin as well. The OC's LQ is still greater than 1, but it has been slowly declining since 1990.

It is critical to note that OC also faces challenges from lower-cost alternatives, notably in Austin and other parts of Texas, as well as Phoenix, Nashville and other up and coming locales. Over the past five years, the information industry growth — which includes a large sec-

TOP 20 METROPOLITAN AREAS:

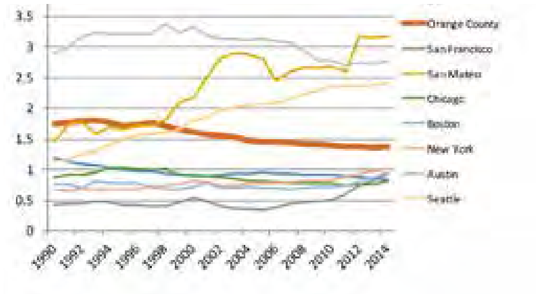
Cumulative Growth in Information Jobs, '10 – '15

Orange County creates professional services 9x slower than the top market

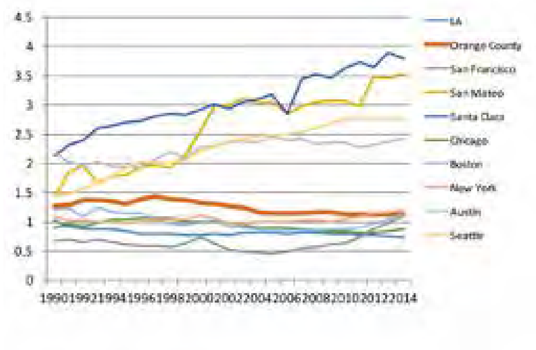
Rank	Area	Total Information Employment Cumulative Growth 2010-2015
1	San Francisco-Redwood City-South San Francisco, CA	62.02%
2	San Jose-Sunnyvale-Santa Clara, CA	57.48%
3	Phoenix-Mesa-Scottsdale, AZ	39.29%
4	Austin-Round Rock, TX	34.32%
5	Raleigh, NC	18.54%
6	Charlotte-Concord-Gastonia, NC-SC	16.72%
7	West Palm Beach-Boca Raton-Delray Beach, FL	16.24%
8	Atlanta-Sandy Springs-Roswell, GA	15.67%
9	San Antonio-New Braunfels, TX	15.55%
10	Seattle-Bellevue-Everett, WA	15.29%
11	Las Vegas-Henderson-Paradise, NV	14.39%
12	Fort Lauderdale-Pompano Beach-Deerfield Beach, FL	13.48%
13	New York City, NY	12.65%
14	Portland-Vancouver-Hillsboro, OR-WA	12.19%
15	Salt Lake City, UT	9.04%
16	Nashville-Davidson–Murfreesboro–Franklin, TN	7.80%
17	Boston-Cambridge-Newton, MA	6.97%
18	Anaheim-Santa Ana-Irvine, CA	6.78%
19	Warren-Troy-Farmington Hills, MI	6.36%
20	Indianapolis-Carmel-Anderson, IN	5.73%

Source: New Geography 2015 Rankings of the Best Places to Do Business - Information

TECH DECLINE LQ



TECH SERVICES LQ



tion of high-tech services — in Orange County was ranked 25th, roughly in the middle of the nation's 52 largest areas. It registered only 6.7 percent growth since 2010, barely one-tenth the expansion seen in San Francisco and one-fourth the growth enjoyed by Phoenix.

HIGH TECH MANUFACTURING.

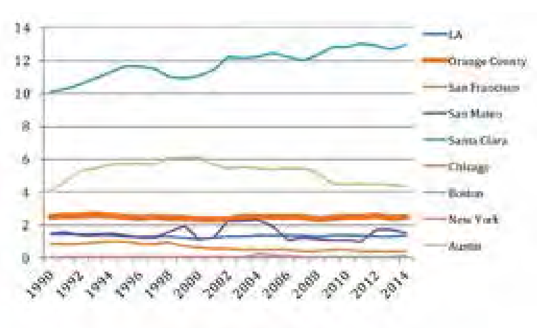
The surprising bright spot, relatively speaking, pertains to high-tech manufacturing. In the 1960s urban geographer Allen Scott identified high technology, including military spending, as making OC "one of the most important and productive centers of the American production industrial system today". This industrial workforce was always highly skilled, with a much higher ratio of white collar compared to blue collar workers.

Orange County managed to survive the post-Cold War economy with large parts of its tech-centered industrial system intact — despite a drop off of aerospace employment from 42,000 in 1990 to 15,000 now. This occurred in large part because other sectors of high-tech manufacturing, such as computers, mass storage and medical devices picked up the slack. This performance is far better than Los Angeles, which is now below the national average in this significant field.

Orange County's LQ is depicted in dark red and has remained stable at over double the national average for the past 25 years. Santa Clara, the home of Silicon Valley remains the clear leader in tech manufacturing. Its LQ is almost five times that of Orange County's and it has risen steadily since 1990. However, Orange County is the #3 market, behind Austin, Texas.

New York, Seattle, Boston, Chicago, and San Francisco all have a lower concentration of tech manufacturing workers than the nation's average (and much lower than Orange County). The area's tech manufacturing knowledge infrastructure could provide a critical advantage to the county's broader advanced technology sectors, particularly as new innovations allow for more tech manufacturing to occur here in the United States.

TECH MANUFACTURING LQ



Overall, manufacturing still plays an outsized role in developing technological capacity, particularly in the high value added sections so prevalent in Orange County. In 2012 , for example, manufacturing accounted for 68.9 percent of all R&D expenditures by U.S. businesses and employed 36 percent of the nation's scientists and engineers, the largest share of any sector.

FUTURE PROSPECTS

For Orange County to regain its momentum in tech-related industry, business, non-profit institutions, notably universities, the government needs to focus on how to grow, maintain and attract firms in this sector.

We believe the prospects for tech success in Orange County need to be holistically managed. In Silicon Valley, for instance, there is a consciously managed eco-system for technology. Education, venture finance, networking (both physical and social), job placement and idea sharing all happens with the active participation of technology companies.

That does not appear to be the case in the OC, although laudable attempts (such as Octane and Tri-Tech) have been made in the past. In Orange County, the pattern has been for leading companies – Ingram Micro, Vizio, Broadcom, Gateway, AST Research, Newport, Kurion and Oculus — -to be acquired rather than be acquirers. Part of the problem stems from the entrepreneurially-driven culture of Orange County, which has not resulted in the growth of locally-oriented large companies.

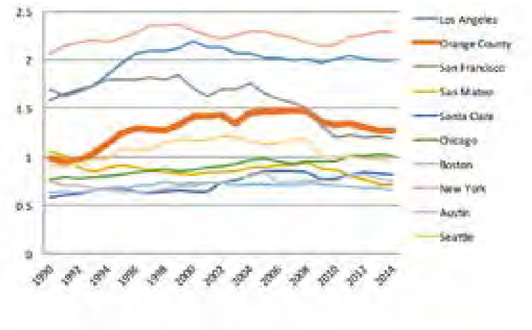
THE LIFESTYLE INDUSTRIES

From its early emergence as "Surf City" and theme park magnet, Orange County has demonstrated great strength in the "lifestyle" industries: the arts, entertainment, recreation and design. Altogether these industries account for roughly six percent of OC employment, they could meld with the tech sector in critical ways. Artists, notes Ann Markusen "export significant portions of their artwork, provide a flexible creative workforce for employers in cultural industries, make it easier for all employers to recruit skilled workers, and invest sweat equity in neighborhoods". [19] Ultimately, art contributes to a city's individuality and it has the power, like stunning topography, to attract professionals from all over the country.

As of 2014, Orange County's lifestyle, art, and manufacturing industries are comparatively stronger than the nation's average. Orange County leads in this area, with an LQ of 1.78, higher than all other competitive counties in our analysis. In the selected high end cities, only New York, San Francisco, Los Angeles and Seattle also had LQ's greater than 1. The relationship between each county from 1990 to 2014 is plotted in the figure in the graph below.

ARTS POWER LQ

LIFESYLE INDUSTRY LQ



The arts could play a growing role in OC's evolving economy. A recent study by the Otis Institute estimates the "creative economy" [20] in OC at 54,000 jobs. Creative industry employment in Orange County increased in two of the last three years, with a robust 5.3% gain occurring in 2014. Having added nearly 2,700 jobs over the previous year, wage and salary employment in the county stood at 53,400 in 2014. Job gains are anticipated over the forecast period with employment reaching 58,100 by 2019, a 9.7% increase.

The county's creative footprint also extends to a host of other industries including sporting and athletic good manufacturing, apparel, shoe and clothing stores. OC's unique sun and surfer culture given rise to a number of lifestyles businesses that cater to those interests. In fact, Orange County, primarily Huntington Beach, led the commercialization of surfing into something close to an industry, including such iconic surf shops as Hobie, the Frog House, and Jack's Skateboards, which all opened in that beach community in the mid-1950s through the early 60s.

A mix of clothing and equipment trends have swept the nation, and many well-known brands like Hurley, Oakley, Vans, RVCA, Quicksilver, Rip Curl, PacSun and DC Shoes are headquartered in Orange County. Like the arts, this remains an area of relative strength in the county.

Among the ten counties in our evaluation, Orange County's LQ ranked 3rd by the end of 2014, behind the two traditional lifestyle centers of Los Angeles and New York. Its trend line since 1990 has been positive, but has declined somewhat since the Recession. The arts and lifestyle industries are still smaller than tech, but its overall employment has grown since 2004, by 21%. This has seen its share of the total labor force increase from 2.7% to 3.2% in that period.

PROFESSIONAL AND BUSINESS SERVICES: A CRITICAL SECTOR

Over the past decade, business services have emerged as easily the largest high-wage sector in the United States, employing 19.1 million people. These are the white-collar jobs that offer a ladder into the middle class. Dominated by administrative services, consulting and management jobs, the sector also includes skilled workers in legal services, design services, scientific research, and even a piece of the tech sector with computer systems and design. Since 2004, while the number of manufacturing and information jobs in the U.S. has fallen, the business services sector has grown 21%, adding 3.4 million positions.[21]

This sector — with a $30 an hour average salary (about 20 percent above the national nonfarm average) -- contributes the largest share of high-wage jobs. Nationwide it employs just under 20 million people. Since 2010 the business services sector has grown by more than 3 percent a year, adding nearly 3 million jobs.[22]

TOP 20 METROPOLITAN AREAS:
Cumulative Growth in Professional Business Services, '10 – '15

Orange County creates professional services 3x slower than the top market

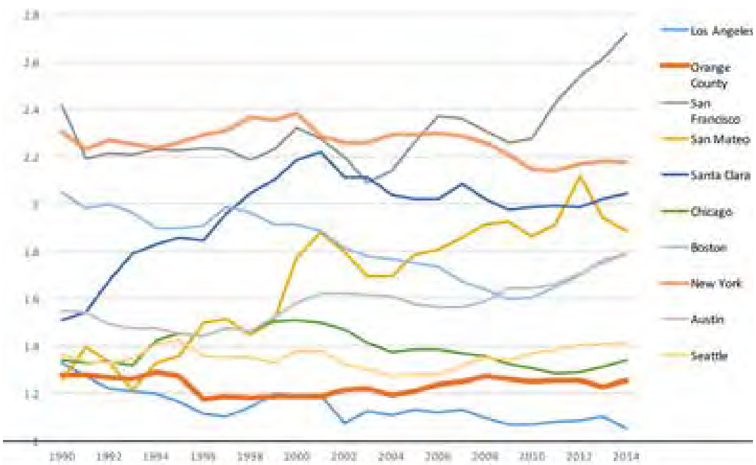
Rank	Area	Total Prof and Bus Services Employment Cumulative Growth Rate 2010-2015
1	Nashville-Davidson–Murfreesboro–Franklin, TN	47.2%
2	San Francisco-Redwood City-South San Francisco, CA	45.7%
3	Austin-Round Rock, TX	42.3%
4	San Jose-Sunnyvale-Santa Clara, CA	36.4%
5	Dallas-Plano-Irving, TX	28.9%
6	West Palm Beach-Boca Raton-Delray Beach, FL	28.2%
7	Raleigh, NC	27.9%
8	Orlando-Kissimmee-Sanford, FL	26.8%
9	Tampa-St. Petersburg-Clearwater, FL	26.3%
10	Indianapolis-Carmel-Anderson, IN	26.2%
11	Memphis, TN-MS-AR	25.5%
12	Charlotte-Concord-Gastonia, NC-SC	25.3%
13	Las Vegas-Henderson-Paradise, NV	25.0%
14	Portland-Vancouver-Hillsboro, OR-WA	24.9%
15	Warren-Troy-Farmington Hills, MI	24.7%
16	Miami-Miami Beach-Kendall, FL	24.4%
17	Atlanta-Sandy Springs-Roswell, GA	23.9%
18	Salt Lake City, UT	23.8%
19	Denver-Aurora-Lakewood, CO	23.4%
20	Seattle-Bellevue-Everett, WA	22.1%
38	Anaheim-Santa Ana-Irvine, CA	16.1%

Source: New Geography 2015 Rankings of the Best Places to Do Business - Professional and Business Services

In the 1980s Orange County became a favored location for these kinds of firms, including many Japanese and Korean companies, many moving to the Irvine industrial park alone.[23] But that edge also seems to be eroding. Orange County now lags in sector growth behind both high-cost tech areas such as San Francisco and San Jose, whose business service employment has jumped by roughly forty percent since 2010, as well as low cost alternatives such as Nashville, Dallas-Ft. Worth and Orlando, who have also experienced rapid growth.

In contrast, Orange County's business service growth can be best described as mediocre at 16.1%. It is higher, however, than Los Angeles', whose sector grew only 13.8 percent since 2010, among the lowest of any large region in the country. But the overall comparative trend is not so positive particularly given the incomes needed to live in this county. Although OC's LQ remains somewhat above the national average, it is well below the key competitive regions such as the Bay Area, and New York, and is losing ground to upstart regions such as Austin and Seattle.

PROFESSIONAL & TECHNICAL SERVICES LQ



THE REAL ESTATE SECTOR: THE DOWNSIDES OF SUCCESS

Given its climate and natural amenities, real estate, particularly near the coast, has long played a central role in the life of OC As historian Kevin Starr observed, by the 1980s and 1990s real estate prices had become “the staple of cocktail and inner party conversation.”[24]

But in this case, we might have too much of a good thing. Compared to major markets in the United States, more people in Orange County work in the real estate, leasing and construction industries, per capita, than other areas. As the data below shows, only New York City has a greater concentration of people employed in the real estate industry than Orange County. And, of all the markets we tracked, it has the most concentration of employment in the construction industry.

Given its outsized influence, the recovery in the real estate sector has contributed to the recovered sense of a stronger economy, particularly after the Recession. There has been some return of commercial construction, although well below the remarkable growth levels experienced in the 1970s, 80s and 90s.[25]

But the biggest impact of real estate on the OC economy is in the housing market. Orange County naturally appeals to wealthy people, prosperous immigrants and investors. Yet the area’s real estate inflation also stokes many of the region’s problems, as we discuss below, from economic competitiveness to growing poverty, a decline in young workers and rapid aging.

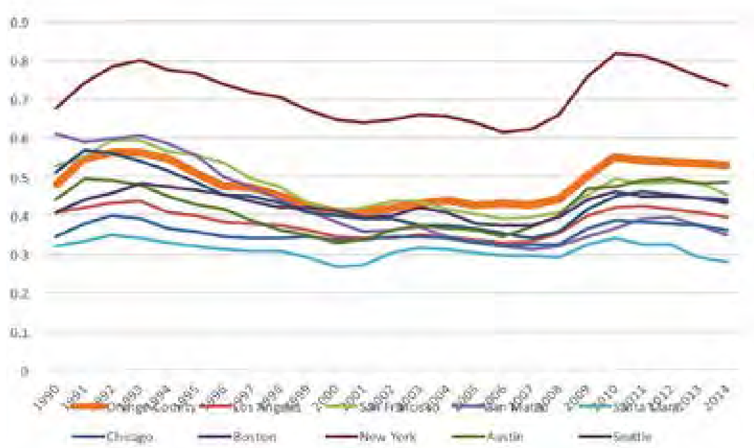
Some OC businesspeople seem to see real estate values as the ultimate talismans of prosperity, mistaking higher real estate prices for an actual productive economy. OC’s “boom”, in fact, may be more about asset appreciation than growth in high wage jobs.

Fundamentally these high prices, along with generally modest income gains, are making life difficult, particularly for middle and working class families. A recent study we conducted for Chapman University’s Center for Demographics and Policy, which ranked regions by their environment for young, middle class families, found the Los Angeles region, including Orange County, at 102nd out of the 106, for areas with more than 500,000 population.[26]

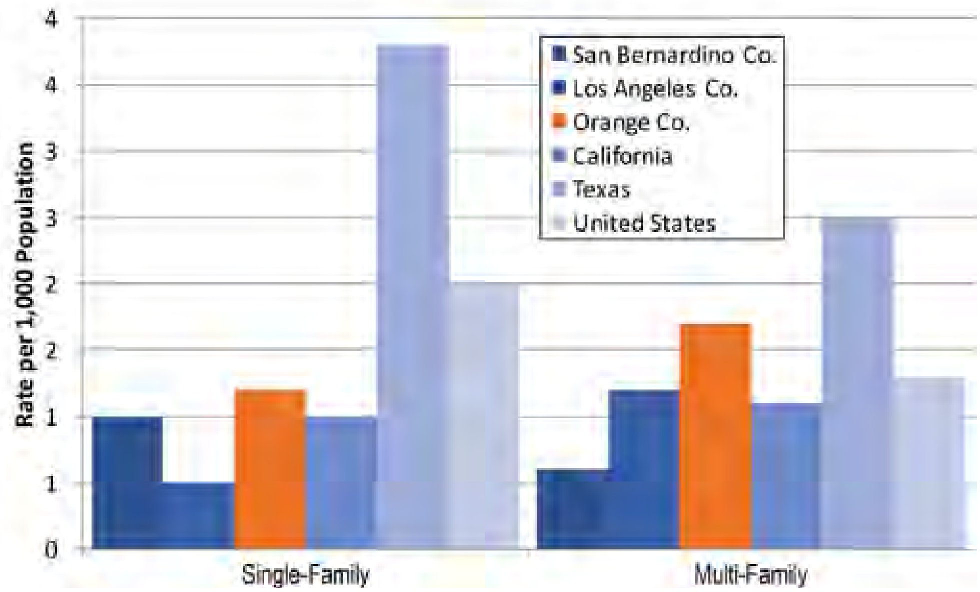
At the same time, relatively little new housing is being built not only in Orange County but across all of Southern California. Many of the area’s most attractive to companies relocating out of the region — for example, Texas — have been building housing at a far faster clip. In 2014 Houston and Dallas-Ft. Worth, with a population roughly one-half of Los Angeles-Orange, have issued somewhere close to two times as many new permits.

Much of the blame here can be ascribed to California’s convoluted, and highly ideologically driven planning system. The state’s desire to force ever more density, and limit development on

REAL ESTATE & RENTAL LEASING LQ



NEW HOUSES: Building Permits, *2014 by Type*



the urban periphery, is well known to developers. Yet these policies have not even sparked a high rate of construction of multifamily units, outside of Silicon Valley. OC's rate is well below national levels, much less those in the Texas cities and other low-cost competitors

Some suggest that the solution to the affordability crisis here is high –density housing, however, as we point out below such housing is far more expensive on a per square foot basis. The cost per square foot for townhouses can be as much as double that of detached housing, while high rise housing can be more than six times the cost of detached housing.

As disappointing as the multi-family picture appears, it is worse for single family homes. This form of housing is vastly preferred by most buyers, particularly families. Last year Orange generated 1.2 permits per 1000 residents, more than twice as many as Los Angeles, but less than half the national average. In contrast Dallas-Fort Worth produced 3.6 and Houston 5.9; overall Texas is creating roughly four time as much single family housing per thousand than California. Given the trajectory of state policies, it is highly unlikely that many new projects with this kind of product— even well-designed ones— will be approved in the coming decades.[27]

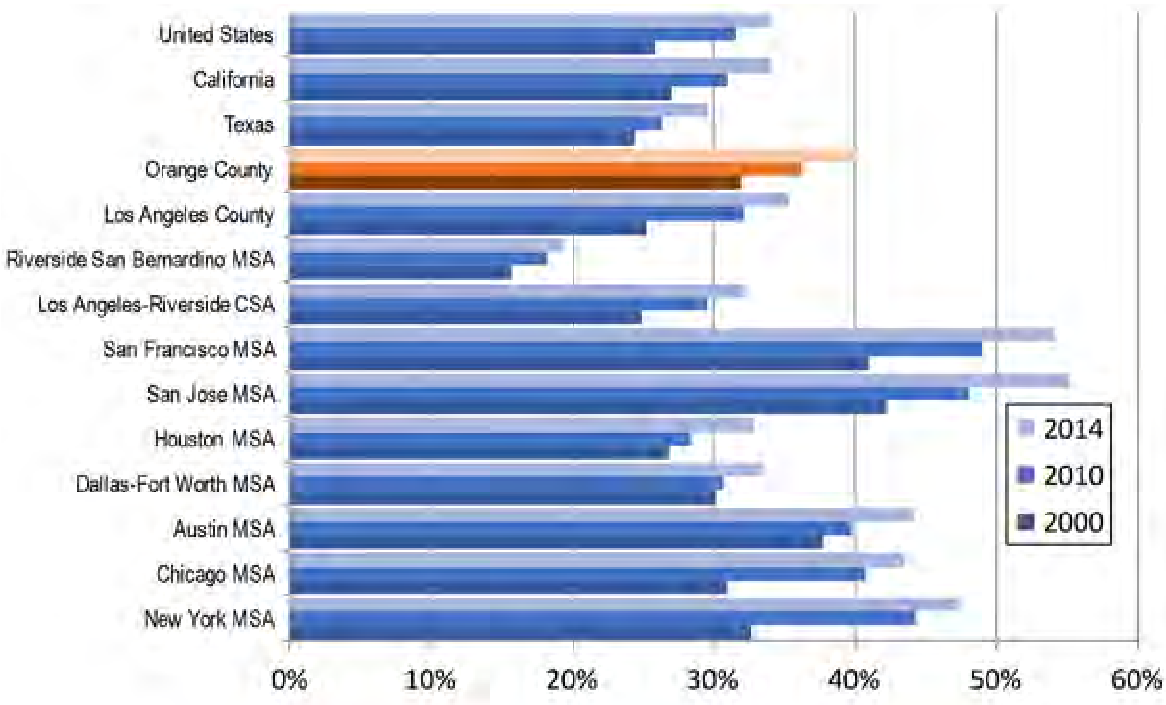
Of course the biggest "losers" from the inflation of real estate are working class renters. Los Angeles rents are already among the highest in the county relative to incomes, and the OC is not far behind.[28] If one full time worker rents a two-bedroom apartment in Orange County they can expect to spend over 40% of their income on rent.[29]

DEMOGRAPHIC CHALLENGES

In the 21st Century, the key arbiter of economic growth lies with the skills of the workforce. The late futurist Alvin Toffler predicted in 1980 that the companies, whether in factories or offices, "would require workers capable of discretion and resourcefulness rather than rote responses."[30] By this, Toffler was not

BA OR GRADUATE DEGREE: AGE 25 – 34

Orange County in Context • US Census Bureau data



merely talking about piling degrees upon degrees, but in finding people capable of thinking for themselves.

This is particularly relevant for areas like Orange County, that have high costs and exist within strong regulatory environments. The only way to support these high cost economies — as we can see in of the Bay Area, as well as places like Boston and Seattle — is through entrepreneurial guile and innovative skill; being ordinary does not work unless a place offers lower costs, possesses great natural resources (and is willing to exploit them), or a critical strategic location.

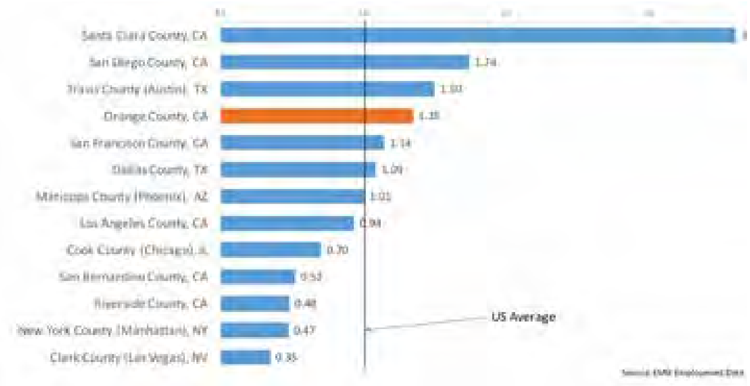
HOW OC STACKS UP IN SKILLS: BETTER THAN MOST, BUT LESS THAN THE SUPER-STARS.

In trying to ride the information economy wave, Orange County faces severe pressure from two sources: traditional innovation centers, such as Boston, Austin, Seattle and the Bay Area, and emerging lower cost, less regulated alternatives in the Intermountain West, Texas, the southeast and even the Midwest.

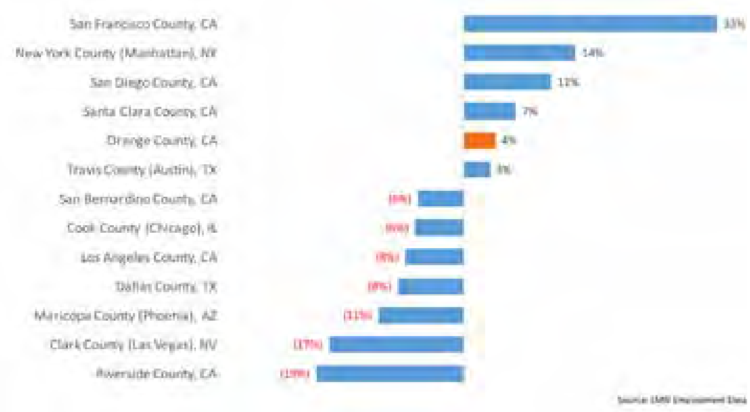
In the context of southern California, OC remains relatively strong, boasting a share of college educated workers (among those 25) of 40.1 percent, five percent higher than Los Angeles County and six percentage points ahead of the state. This rate is more than double that of the Inland Empire.

OC's share of engineers in its workforce is above the national average, and much above Los Angeles, whose concentration is now below the national average, and falling. But OC's engineering metrics are far lower than that of Santa Clara, the center of Silicon Valley, San Diego and Austin. Perhaps more disturbing, the area's growth in engineers since 2007 — 4 percent — lags behind many key competitor regions, including San Francisco, New York and San Diego.

CONCENTRATION OF ENGINEERS, 2016



CHANGE OF ENGINEERS, 2007 – 2016



POPULATION AND MIGRATION TRENDS

The days of rapid population growth in Orange County are over. The population growth in the past 9 years has been only 1%. Slow population growth seems in store for all of Southern California, with the exception of the Inland Empire. Like Los Angeles, Orange County's population is growing slower than the state and national average — 0.7 percent a year since 2000. Given the area's high housing prices and less than optimal economy, there is little reason to expect that this trajectory will change in the near future. In contrast, places like Dallas-Ft. Worth and Austin are growing three times or more as fast since 2000.

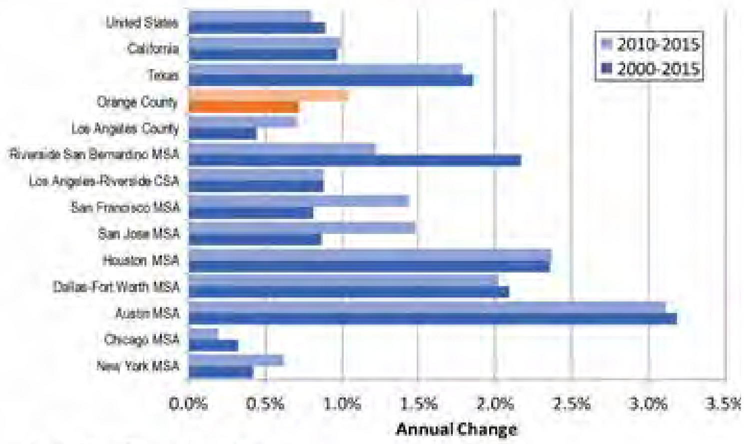
This movement to lower density (and lower cost) cities contradicts the core beliefs of our planning elites — and some allied business interests as well — that people are generally more attracted to dense, urban areas. Between 2000 and 2015 Los Angeles County has lost roughly 1.4 million domestic migrants while Orange County declined by 250,000. In contrast, the Inland Empire gained a half million people, many from the coastal counties. Since 2010 this trend has continued, although at a slower rate. Net in-migration for "sprawling" regions, notably in Texas, has been even greater.[31]

These patterns are evident when looking at trends in southern California. In contrast, Los Angeles' rate of out-migration continues to be substantially higher than that of the OC. Last year over 60,000 more domestic migrants left denser Los Angeles than came while Orange County lost a more modest 10,000 residents. Once again the Inland Empire — the heartland of "sprawl" — expanded by 7,000, a modest uptick but quite vibrant compared to the rest of the region. If high density urbanization associated with Los Angeles is attractive to most migrants, this is not evidenced in the Census data.

The shift to less dense regions can also be seen by looking at migration in and out of OC. Using IRS figures, we have identified which parts of the country people are coming to and from where between 2000 and 2014; people are coming here from dense counties in the Northeast Corridor (New York Washington, Boston and Philadelphia), as well as Chicago and Detroit areas and, most of all, Los Angeles. In contrast, exiting Orange County residents primarily head to lower cost, less dense locales, most notably the Inland Empire, Phoenix, Las Vegas, the Salt Lake region, along with the growth cities of Texas' "triangle" which includes Dallas-Ft. Worth, Houston, San Antonio and Austin. Based on analysis of IRS migration figures to and from Orange County by Aaron Renn, senior fellow, Manhattan Institute for Policy research.

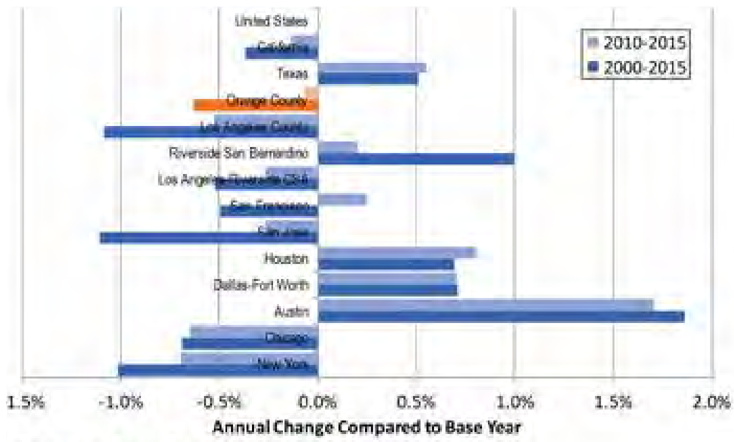
The trend towards dispersion also can be seen as well within the OC. In fact, many communities in the more urban northern core of the county have experienced virtually no or low population growth since 2,000. The majority of growth was concentrated south of the 55, in an arc that spreads to parts of Costa Mesa and Newport Coast to the extreme south end towards San Juan Capistrano, Laguna Niguel, Dana Point and San Clemente.

POPULATION CHANGE



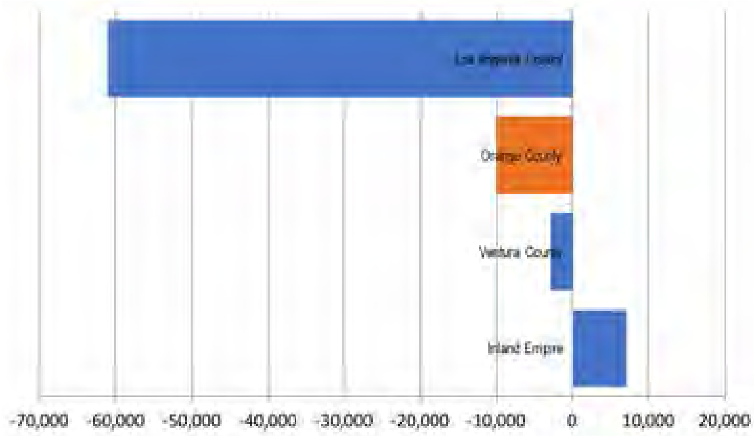
Derived from Census Bureau data

NET DOMESTIC MIGRATION

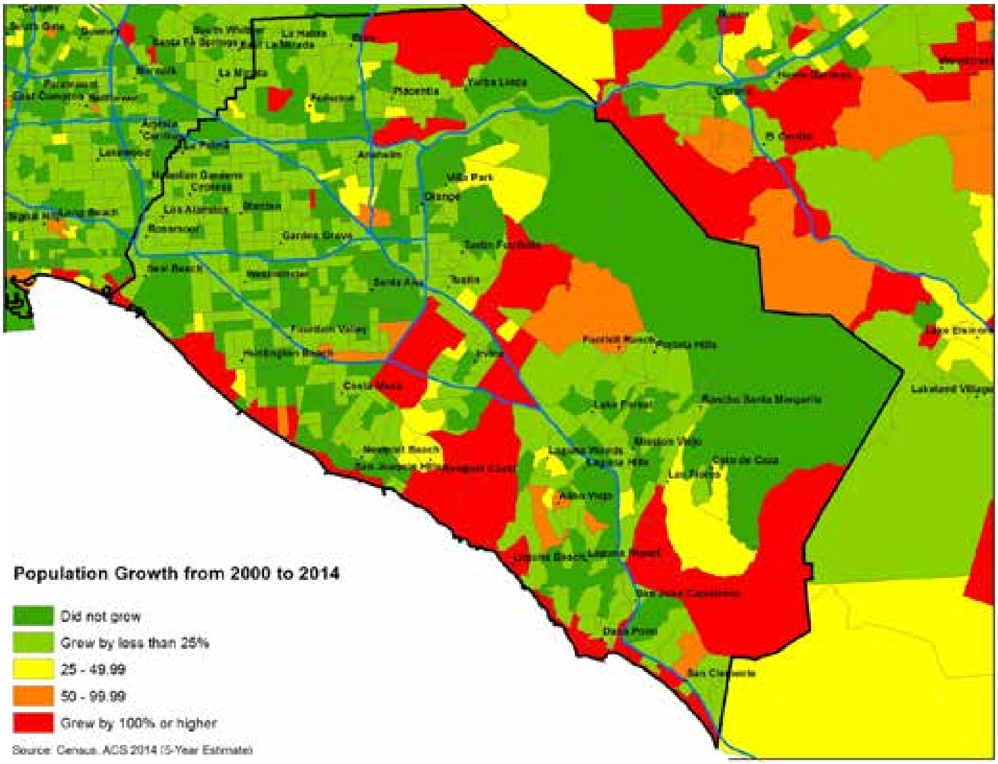


Derived from Census Bureau data

NET DOMESTIC MIGRATION, 2014 – 2015



Derived from American Community Survey: 2006-2010



AN EVER MORE DIVERSE COUNTY

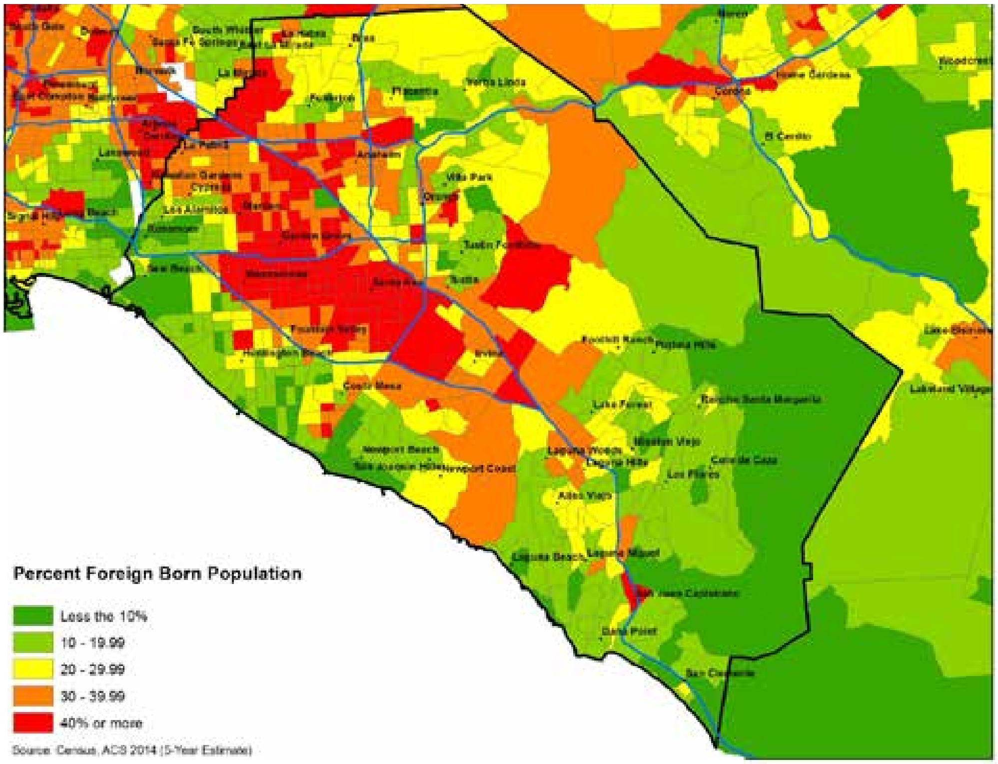
In 1950, just at the beginning of its spectacular growth spurt, Orange County was largely white. The 1950 census indicated a non-white population of only 1.3 percent. However, Hispanics were not separately enumerated.[32]

CHANGE IN FOREIGN BORN

Derived from Census Bureau data

Over the years there has been resistance to changing demographics — in 1993 the OC Grand Jury called for a three year ban on all immigration — but nevertheless the county has become increasingly diverse.[33] In 1970, when the Census counted Hispanics and non-Hispanic whites separately for the first time, 80.0 percent of residents were non-Hispanic white, with Hispanics accounting for just 13.6 percent of the population.[34] By 2014, the non-Hispanic white population dropped to 43.0 percent of the population, while the Hispanic share rose to 35.3 percent.[35]

The OC has not only become more diverse, and immigrant-oriented, but is doing so more rapidly than the national average. Since 2010, Orange County's foreign born resident population has expanded faster than the national average, and far faster than Los Angeles.



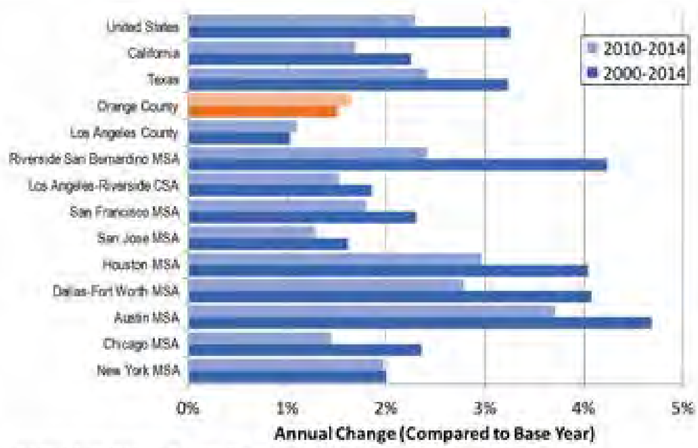
THE RISE AND DISPERSION OF ETHNIC 'VILLAGES'

The largest concentrations of foreign born population, 30 percent or more, stretch from an arc that goes from the communities along the LA county line extending through such communities as Anaheim, Garden Grove, La Palma, La Mirada, Westminster, Orange and Santa Ana all the way south to Irvine and Newport Coast.

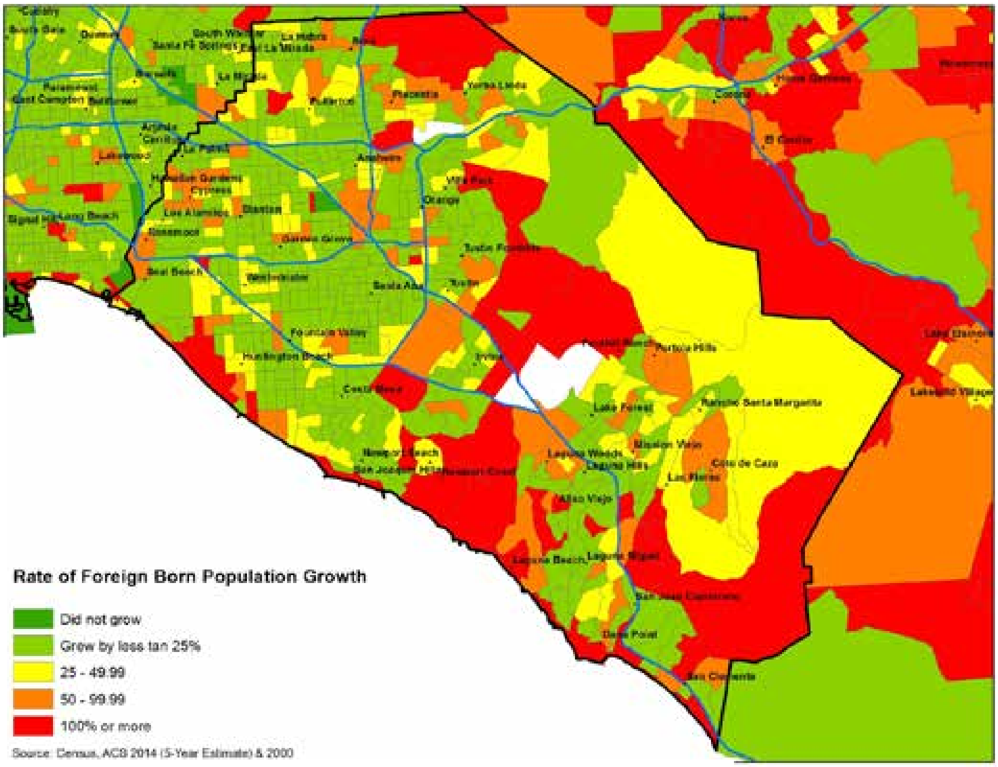
Two groups dominate OC's emerging multi-racial economy — Latinos and Asians. Orange County, of course, always possessed a significant Hispanic population. But the area's Latino growth rate since 2000 has been roughly 50% greater than Los Angeles. This may reflect the region's quality of life and economic vitality compared to that of its larger northern neighbor. Since 1970, Orange County's Hispanic population has grown by 960,000, nearly 20 times as much as much as the white population growth.[36]

Santa Ana remains the epicenter of Latino OC — with a 78 percent Hispanic population. Other OC cities, such as Anaheim, Costa Mesa, Orange, Fullerton and Garden Grove also have Hispanic populations constituting 35 percent or more of the total population.[37]

CHANGE IN HISPANIC POPULATION



Derived from Census Bureau data

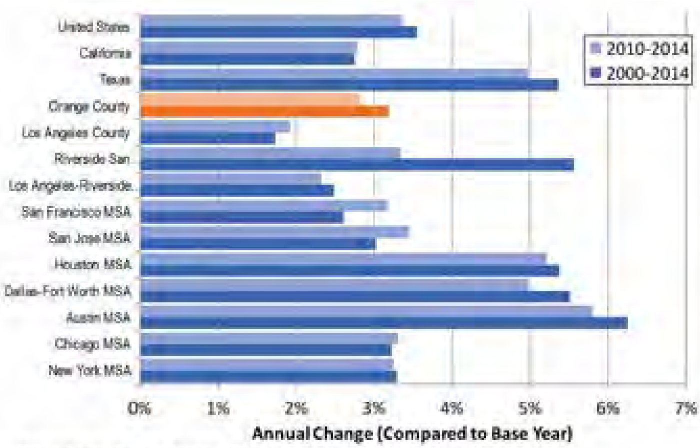


The growth of the Asian population has also been, if anything, more rapid. One critical turning point was the arrival of the Vietnamese after the fall of Saigon, which turned Westminster from a sleepy town to one of the largest settlements of Vietnamese outside the mother country. More recently large Asian populations, notably Koreans and ethnic Chinese, arrived in significant numbers, motivated by both quality of life concerns, notably education, and economic opportunity.[37]

Since 2000, Orange County's Asian population has been growing at roughly three percent annually, roughly 50% faster than Los Angeles County. The OC's rate is roughly equal to that of such Asian migration centers as Santa Clara, San Francisco and New York. Overall, Orange County, is the nation's fourth most heavily Asian county over one million, at roughly 20 percent, and has the largest share among counties with more than 2,500,000 population. The Los Angeles County Asian share of population is only 14 percent, considerably lower than Orange County's.

Even as they change the ethnic culture of the OC, the foreign born continue to reinforce the "post-suburban" model existent before they arrived. Geographer

CHANGE IN ASIAN POPULATION



Derived from Census Bureau data

Ali Modarres notes that the foreign born population is growing most rapidly, not in the traditional immigrant hubs, but towards the newer, once overwhelmingly native born, communities to the west and south of the country.

These ethnic communities and "villages" are reshaping the culture map of the region.[38] These range from the heavily Vietnamese band from Westminster to Garden Grove, to the expanding "Little Korea" in the same area, the thriving Little Arabia in Anaheim and the El Centro Cultural de Mexico, located in Santa Ana. The Orange County Night Market brings a distinctly Asian institution to the area while the Packing House in Anaheim offers a broad array of cuisines from the OC's increasingly diverse population.[39]

THE CHALLENGE OF POVERTY

High poverty rates in OC reflect the confluence of higher housing prices, and rents, with stagnant income gains. Homelessness in the OC, which rose five percent in the last two years, now afflicts over 15,000 country residents.[40]

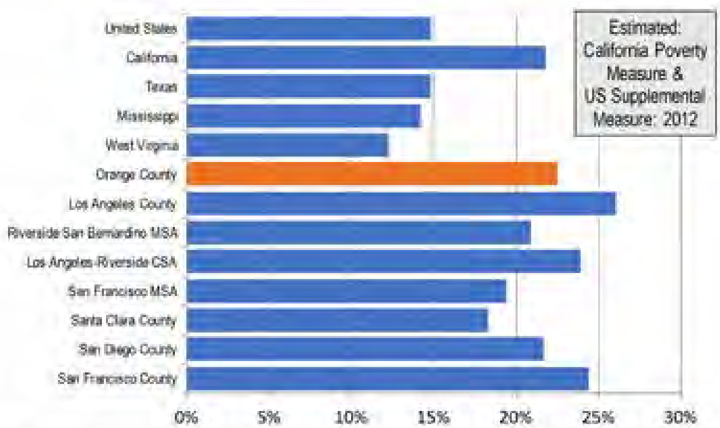
Overall, the Orange County poverty rate, without adjusting for the cost of living, is well below the national and California average. But adjusted to the cost of living, the rate rises considerably; from around 12 percent to over 22 percent, approximately the state average. That Los Angeles county does even worse, well over 26 percent, should not regarded as a badge of honor. In fact, due to the differences in housing prices, Orange County, despite its wealth and large affluent population, actually has a higher poverty rate than the historically more plebeian Inland Empire.

The slow growth, or in some cases, the shrinkage of high-wage employment, including in blue collar sectors, has created something of a "perfect storm" for growing inequality. The gap between rich and poor has expanded 16.7 percent since 2007, a reflecting of an economy where more jobs pay low wages.[41]

OC's poverty problems have been further examined in an exhaustive study released last year by United Way. Factoring in all transportation, housing and food costs, United Way estimates that 29 percent of Orange County family households can barely "get by" and meet their basic costs. This is slightly below the state average of 31 percent and 37 percent for Los Angeles County but significantly higher than in other high-cost areas such as San Francisco, Marin, San Mateo, Santa Clara and Ventura counties.[42]

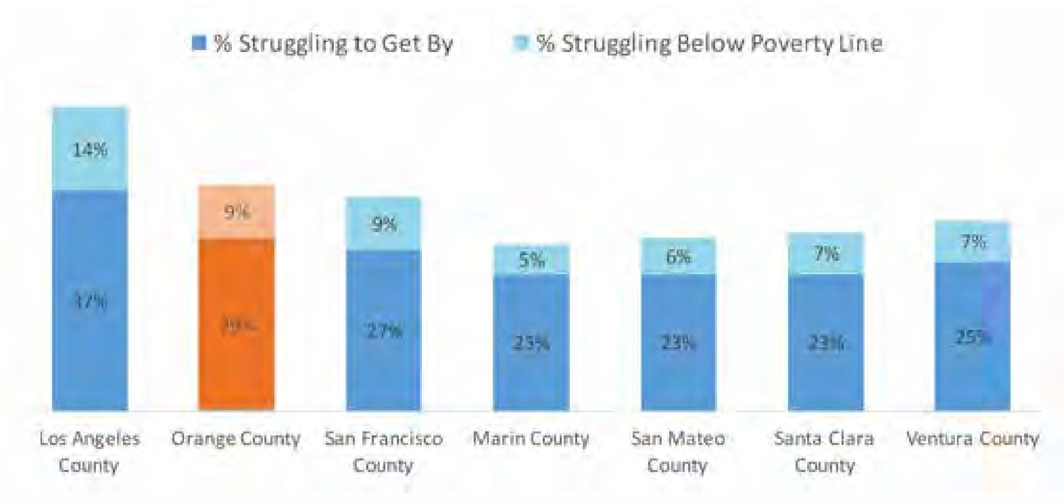
Poverty in Orange County may not be as extreme as in Los Angeles — home to the five of the worst neighborhoods cited in the United Way "real cost" study. But many OC communities such as areas of Anaheim, Garden Grove and Santa Ana, forty to fifty percent of the population earns annual incomes below $50,000 annually.[44] Geographer Ali Modarres provided us a map of what the "geography of inequality" is in Orange County, much of it covering large swaths of the northern and central county.

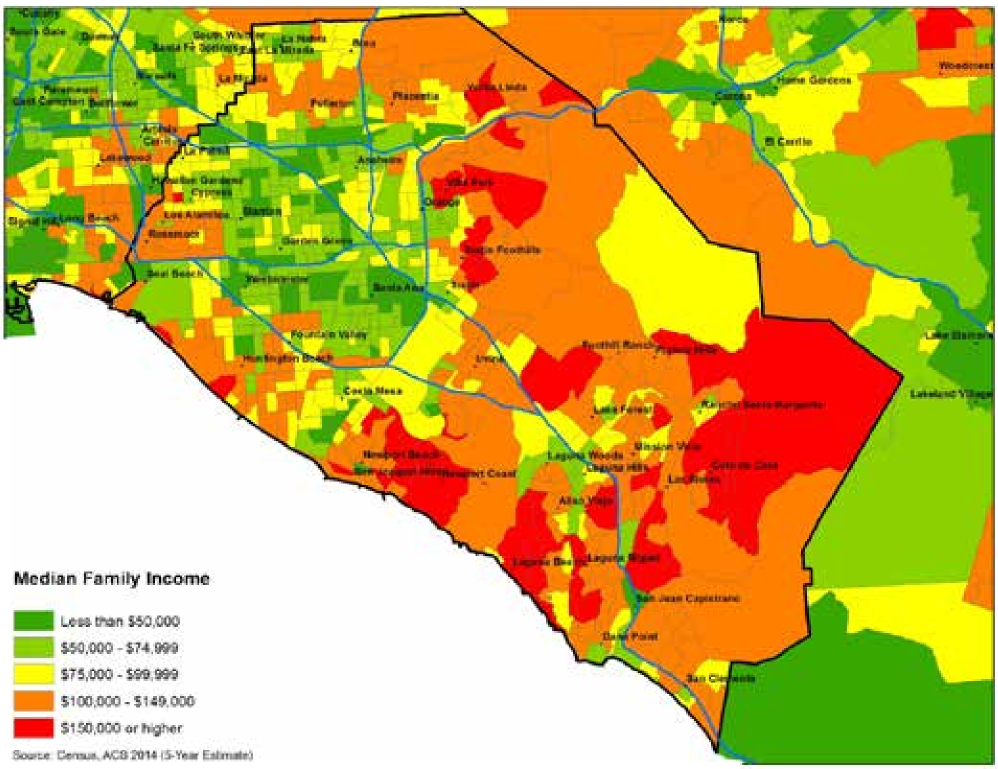
COST OF LIVING ADJUSTED POVERTY RATE

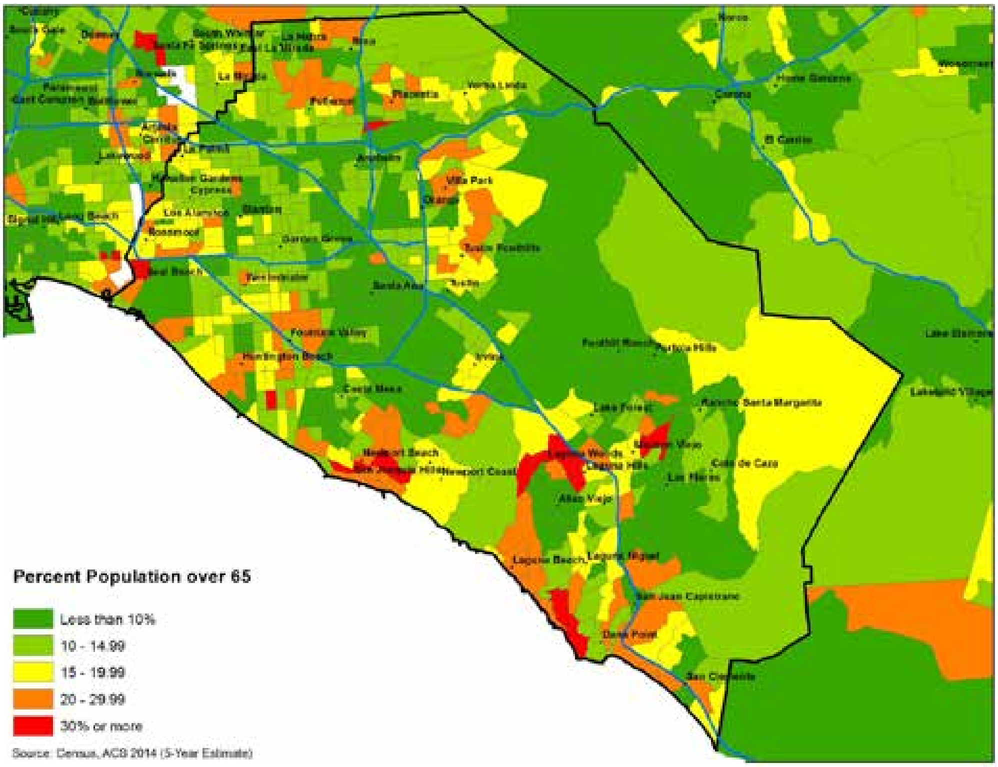


Derived from Census Bureau data

PREVALENCE OF POVERTY AMONG HOUSEHOLDS STRUGGLING TO GET BY







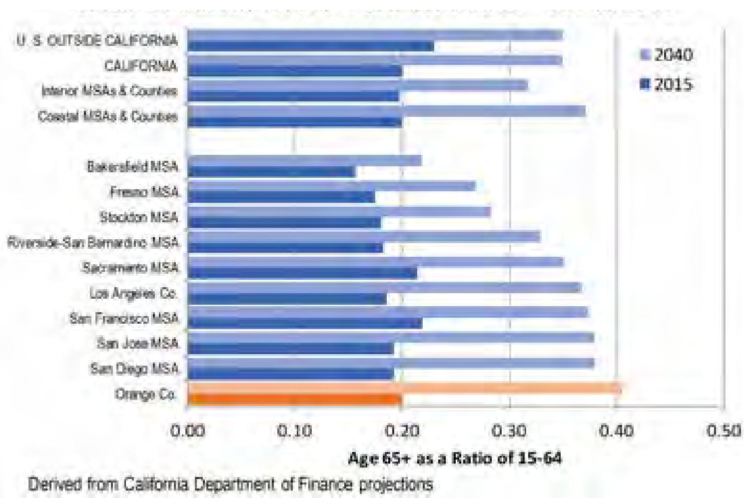
MILLENNIALS, THE FUTURE WORKFORCE AND THE GRAYING OF OC

Southern California, particularly Orange County, long has been seen as a land perpetual youth. Yet in reality the county, is becoming increasingly geriatric. Until the past decade, waves of both domestic and foreign migrants kept southern California's population relatively young. This is now changing, and dramatically. By 2040, among California metropolitan areas of more than 1,000,000 population, Orange County is projected to reach the highest ratio of senior citizens to working age population in the state, well above the national average.[44]

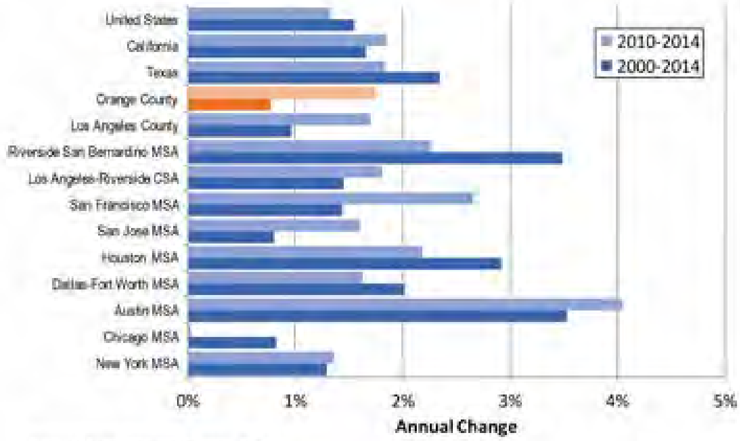
This trend is most marked in those parts of OC that have the highest home prices, and thus have become unaffordable for young and even middle aged buyers. These include communities such as Villa Park, the Tustin Foothills, Newport Beach, Laguna Beach and San Clemente that have among the highest housing prices in the entire country.

In the process, many of these communities are rapidly evolving into what some demographers refer to as NORCs — naturally occurring retirement communities. Newport Beach and San Clemente

OLD AGE DEPENDENCY RATIO: 2015 & 2040



CHANGE IN AGE 25–34 POPULATION



Derived from Census Bureau data

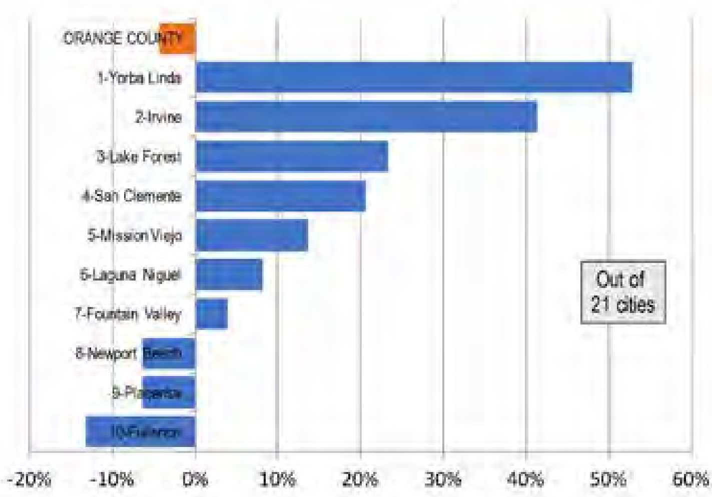
lead the oldster wave. Over 20 percent of Newport Beach residents and 18.6 percent in San Clemente are already 65 or over, figures well above the county, regional, state and national norms. There is also rapid aging even in immigrant-rich areas like Santa Ana, Westminster and Garden Grove.

The rapid aging of OC could well determine our future. Older populations vastly prefer to prefer stay in their homes, which has the effect of reducing the supply for younger people, including the very service workers they tend to require.[45] Older people may also be more interested in preserving wealth than creating it; for them high housing prices — particularly given Proposition 13 protections — serve as a hedge against old age. They also tend to be less enthusiastic about spending for younger people, and more for themselves.[46]

Perhaps most damaging, the aging of OC hampers steps to reignite a strong entrepreneurial growth economy. The need to improve education and build new infrastructure tends to be less persuasive when one's children have grown and move away, as evidenced by the strong vote against a 2014 school bond by residents of aging Villa Park. As is already evident in western Europe and Asia, aging demographics can affect political outcomes.[47]

Proposition 13's property-tax control may explain why so many older property owners feel they can stay in their communities, since they pay minimal property taxes, something that often leads to migration of seniors in other areas. Seniors have made their bed in the nicest parts of the California, and seem determined to stay there, even if their own kids will never be able to live there. *Après moi, le deluge!*

HIGHEST SHARE GROWTH RATE: AGE 25–34



Derived from Census Bureau data

MILLENNIALS AND THE FUTURE WORKFORCE

Just as high prices help some seniors, and other property owners, they threaten the future workforce needed to maintain the county's competitiveness. Since 2000, Orange County's 25 to 34 population has expanded at a slower rate than California, the Bay Area and the rest of the nation. Its growth has been far slower than the burgeoning Texas cities, as well.

Nor is this pattern applicable only to less educated people, who might feel that there is more opportunity in lower cost areas like Texas. Since 2000 OC's growth rate among college educated people 25 to 34 has been well below both US and California norms, and considerably less than the Bay Area, Los Angeles, and the Inland Empire. It also lags far behind the big Texas regions.

Surprisingly, the big winner in the Southland is the least "hip and cool" portion — the Inland Empire. Since 2000 the Inland Empire gained more than 170,000 millennials compared to barely 40,000 for Los Angeles and half that for Orange County. Young people are characterized as being more likely to prefer core cities, but their actual numbers are far smaller than many imagine.

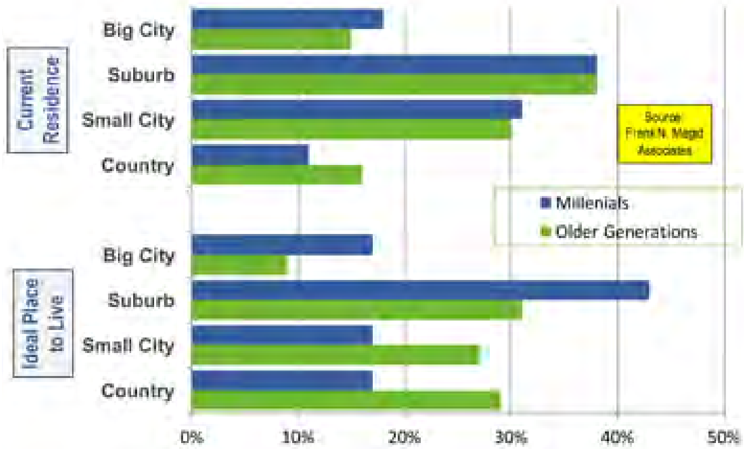
Even within Orange County, the areas that have seen the strongest growth in millennials, both in absolute numbers, have not been in the higher density north, but in places like Irvine, Tustin and Yorba Linda while declining in such places as Newport Beach. Millennial migration patterns may not be exactly what many assume.

Yet overall, millennials are leaving the county at alarming rates. They make up roughly 26 percent of the population but nearly half of those leaving.[48] Once again, a contributing factor is high housing costs coupled with mediocre high wage job gains. Overall Orange County's housing affordability for the median household has dropped from 45 percent in 2012 to 18 percent in 2016.[49]

Some suggest that these issues don't impact millennials who presumably do not seek suburban homes and are uninterested in homeownership.[50] This conventional wisdom is way off the mark, according to surveys by Frank Magid and Associates, the Conference Board , the National Association of Homebuilders and even the Urban Land Institute. Most millennials, when asked their pref-

MILLENNIAL LIFE STYLE CHOICES

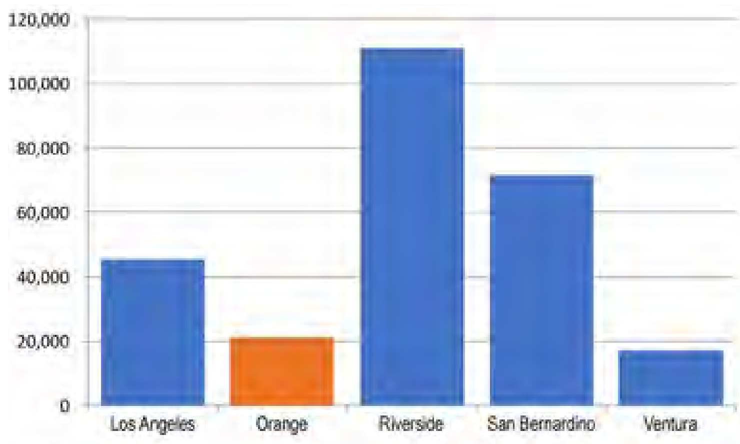
Compared to older generations



erences, seek single family homes, mostly in suburban settings, over permanent residence in the city.[51] Indeed, when millennials do purchase homes, albeit usually outside high cost areas like OC, roughly 80 percent are for single family homes, the signature residential form of suburbia.[52]

The aspiration to own a home is determinative for many, if not most, younger people. The conventional wisdom holds that millennials are uninterested in home ownership, yet they remain about as interested in homeownership as older

CHANGE: BA OR GRADUATE DEGREE: AGE 25–34



US Census Bureau & 2010-2014 American Community Survey data generations.[53] The problem facing them is cost relative to incomes which is why the Los Angeles metropolitan area, which includes OC, now (2014) has the lowest homeownership rate of the 53 metropolitan areas with more than 1,000,000 population, at 48.3 percent, the only major metropolitan area with a home ownership rate of less than 50 percent. Orange County has a higher home ownership rate of 57.4 percent, but still would rank it at 47th lowest in homeownership among the 53 major metropolitan areas, if measured on its own.[54]

This decline in prospects for home ownership even applies even to highly skilled workers. A biomedical engineer, for example, earns a median salary that does not quality one for a median priced house in the OC Other skilled professions, such as registered nurses, computer programmers and teachers do even worse. [55]

Finding ways to accommodate the aspirations of millennials will be crucial. Building more dense housing may be a short-run solution, but as the generation ages the percentage who wish to live in dense urban environments drops precipitously, as demonstrated by research from economist Jed Kolko. [56]

We could be faced with a future, as suggested by economist Chris Thornburgh, of OC as "a country club" region. That may well appeal to older, affluent residents, but it cannot be good news for companies who need new employees if they wish to grow and expand here.[57]

This can be seen in some recent relocations out of southern California. Albert Niemi, Jr., dean of the Cox School of Business at Southern Methodist University has reported that the biggest reason why Toyota left Torrance for the Dallas-Fort Worth area is housing costs. What is a great boon to property owners may prove a tremendous dis-incentive for business locations.[58]

Corporation relocation expert Joseph Vranich, of Spectrum Location Solutions documents more than 1,500 business known disinvestment events over the last seven years. Orange County had the second most known business disinvestments, with Los Angeles County having the most.[59] That the Bay Area, with even higher prices, has not lost as much says something of the OC dilemma of being caught between more vibrant high cost economies and faster growing low cost ones.[60]

Long term, even the Silicon Valley could prove vulnerable to high housing costs, according to a recent report by the California Legislative Analyst (LAO). In a 2014 survey of more than 200 business executives conducted by the Silicon Valley Leadership Group, 72 percent of them cited "housing costs for employees" as the most important challenge facing Silicon Valley businesses.[61] A recent San Jose Mercury survey, for example, found that upwards to a third of Silicon Valley residents seek to leave soon, largely due to residential home prices.[62]

There is, of course, a limit to what a local or regional community can do to attract and maintain businesses and jobs. The State of California is known widely in the business community as having a regulatory and tax environment that adds significant cost and complexity to doing business. However, the fact that state officials and business people are at least discussing this issue is encouraging. That discussion needs to be replicated at the regional level.

A FORMULA FOR THE FUTURE

Drawing from the data presented in this report, the obvious question becomes, "What does the path forward look like?" As we stated at the start, we need to reset the focus of Orange County towards jobs creation through attracting and nurturing higher wage employers. Real estate values may go up or down, but fundamentals — companies, people, goods, services — are what really add value to the region, which, in turn, supports property prices.

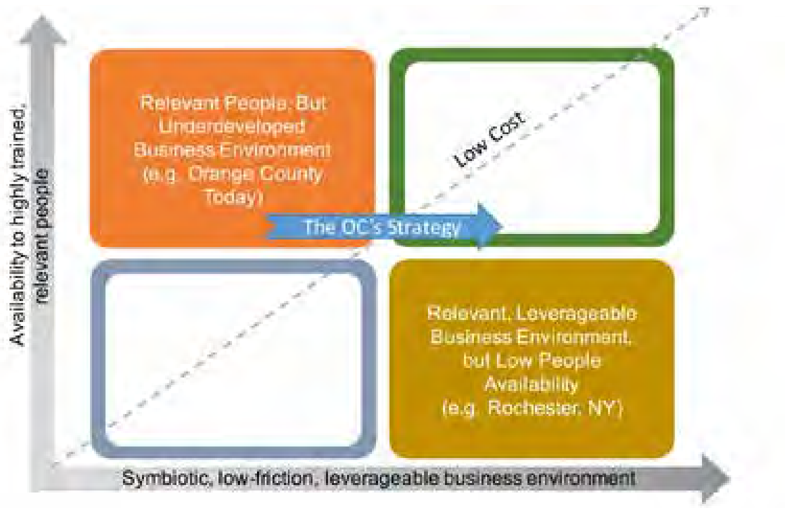
There is no mystery on what to do. Regions that thrive, as Jane Jacobs observed forty-five years ago, export more in goods and services than they take in. Speculation in real estate rewards largely the ownership class; but what is really needed, particularly for the new generation, are investments in export-oriented skills such as high tech factories, software design, and the creative industries.[63]

How do we build such an economic strategy? In Silicon Valley, notes Anna Lee Saxenian in Regional Advantage, a critical element of success lay in a "surprising degree of cooperation among companies, almost Japanese in its closeness." This network extends also to investors, attorneys, and other business service providers. Government did not lead the charge, but worked, at least initially, not to impede it. Most players had a strong sense of a common goal: to make the Silicon Valley an epicenter of high end economic opportunity. They largely succeeded.[64]

Such an effort requires a collective will that draws commitment not only from expected economic gain but from a genuine sense of pride in "place". It should not be so difficult for start-ups here to keep their talent from heading north to Silicon Valley or for other industries to see key employees from heading either to high prestige locales like New York or to more affordable ones.[65]

The challenge ahead, as we see it, is to find a way to compete both with top tier economies such as Silicon Valley, the Puget Sound region and New York —

3 KEY DRIVERS FOR ATTRACTING BUSINESSES AND JOBS TO A COMMUNITY

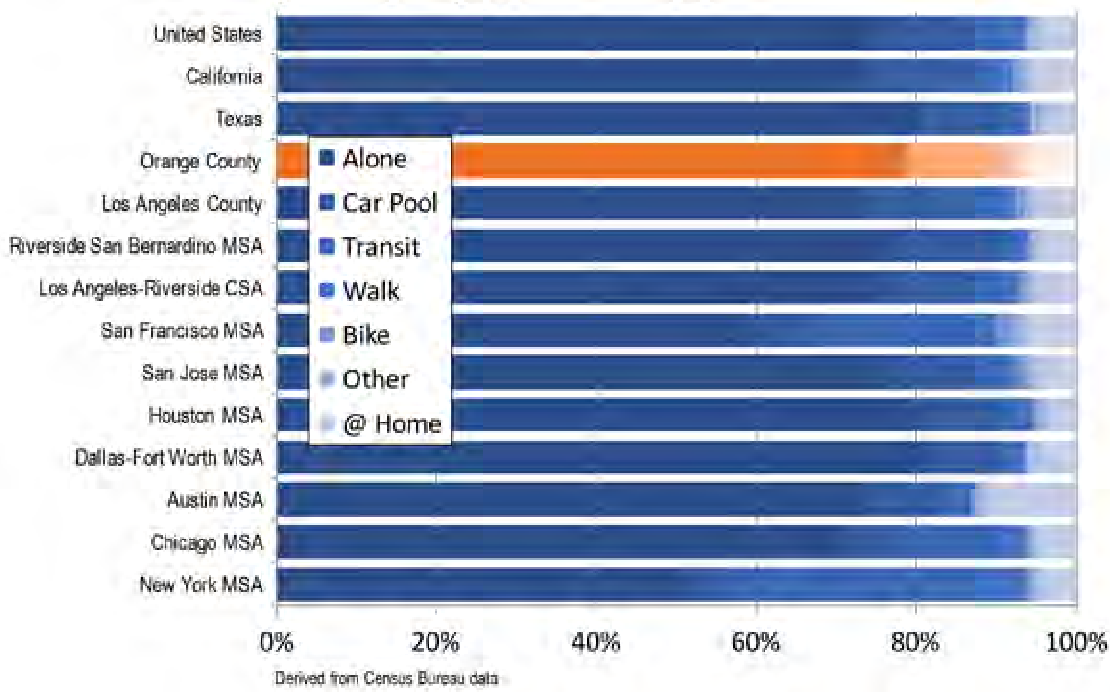


and at the same time offer enough of a value proposition to meet the challenge from up and coming lower cost regions such as Phoenix, Dallas-Ft. Worth, Salt Lake City, Raleigh and Austin. The nature of this challenge is illustrated in the above graphic.

THE SIREN SONG OF URBAN "DENSIFICATION"

The prevailing conventional wisdom among urban planners and economic development groups maintains that to succeed Orange County needs to abandon its previous pattern of multi-polar growth and adopt "the concentrated density" strategy, such as is being imposed in neighboring Los Angeles. Their implicit assumption is that if we look more like New York and San Francisco, we will be able to attract the same kind of jobs. Yet, as we have shown conclusively this approach has not done well in Los Angeles, and, overall, its utility is far from the universal salve purported by its advocates.[66]

EMPOLYMENT ACCESS: All Modes



Similarly, the notion that our dispersed urban form and economic growth are incompatible is simply wrong.[67] One does not have to travel far to see this: Irvine and Silicon Valley, as well as places like Bellevue, outside Seattle and Irving, a Dallas suburb—have higher job-to-resident-worker ratios than their closest core municipality.[68] This dispersion of work applies even in the oft-cited model for urban density, Portland, Oregon, where all the net new job growth was clustered in the lower density suburb and exurban areas between 2000 and 2014.[69] Indeed, more than 80% of employment growth from 2010 to 2013 was in the newer suburbs and exurbs.[70]

BOOSTING MOBILITY

Effective transportation, both for people and freight, (mobility) is an important foundation of economic growth and prosperity. In the past Orange County has done well, particularly compared to Los Angeles, in keeping its road system relatively strong. This makes sense since given that in the Los Angeles metropolitan area, cars also account for approximately 98 percent of personal travel, with a more than 99 percent share in Orange County.[71]

A recent, poorly thought out Orange County Grand Jury suggests development of a light rail system in the County. The report starts with the fundamental error of a density comparison between Los Angeles and Orange County not adjusted for the huge amount of uninhabited land in the mountains and desert of northern Los Angeles County and does not examine the failure of urban rail to generate an increase in transit ridership over the past 30 years.[72]

Urban rail, to be sure, works well in "transit legacy cities," (New York, Chicago, Philadelphia, San Francisco, Boston and Washington) — New York subway accounts for all of the national transit ridership increase over the past decade.[73] But in most of the country, particularly regions that have grown most since 1950, most commuting areas are reached nearly exclusively by car.[74] Massive investment in rail transit in Los Angeles, much celebrated around the country, has done nothing to change the share of travel by automobile — despite expenditures of more than $16 billion.[75] In fact, the LA Metropolitan Transportation Authority (MTA) transit system carries fewer riders today than it did before the first rail line was opened, despite a population increase of one-fifth.[76] Nor has the rail investment curbed traffic; the journey to work times in OC are lower than those in Los Angeles, and even much better than those in transit dependent places like New York.

Clearly massive expenditures on light rail or trolley may well be ill-advised. This can be seen by examining the Anaheim Regional Transportation Intermodal Center (ARTIC). This transit station, with its innovative architecture cost nearly $190 million, but has seen its usage fall at least 75 percent short of projection. It was to have been self-supporting, but is reportedly requiring subsidies for day to day operation.[77]

Planned streetcar projects, to be built partially in response to the incentive of federal funding, also promise little in increased transit ridership. For example, the proposed Santa Ana to Garden Grove streetcar line would add a maximum of 3,000 daily transit riders in Orange County. This increase, which would require a capital expenditure of nearly $300 million would add, if expectations are met, only two percent to transit ridership in the county.[78]

Given the current infrastructure and realities, maintaining and expanding the current road system should be given a higher priority. At the same time, we should look at how to maximize the efficiency of this infrastructure by encouraging other mobility options — Uber-like services, dial-a-ride, expanded express bus services — that have far greater utility in a dispersed region like this.[79]

BUILDING ON THE OC MODEL

Government has a critical role to play in nurturing the OC economy, but would be better off focusing on those things that offer the best return to the economy and the people who live here. Government programs can, and should help to provide a growing pool of available talent. Public schools are a primary source of advantage for much of Orange County, and should remain a government priority. Using Census and California Board of Education statistics, Orange County public schools outperformed the state average in such things as graduation rates, college attendance and advanced placement by a wide margin, and did even better compared to neighboring Los Angeles County.[80]

Other big issues could loom even larger, notably water, where both conservation and desalinization may prove the key to the area's long-term future, particularly if we enter, as some believe, a period of extended drought.[81] Steps, including an expansion of desalinization plants, should be the priorities of the public sector, if they are interested in long term economic growth.

Yet whether in terms of transportation or urban planning, any workable strategy needs to be tailored to Orange County's realities. Rather than seek to force all the county to densify, we should instead encourage a multiplicity of smaller, distinct and interesting districts like Anaheim's Packing House, Costa Mesa's OC Mix and Lab, the Performing Arts District the Irvine Spectrum, as well as the revived old downtowns of Santa Ana, Laguna Beach, Orange, Huntington Beach, Fullerton, Yorba Linda and others.

This vision, built on OC's existing model, requires the development of a strategic growth plan, preferably led by the business community, but in conjunction with both the public and non-profit sectors.

HOUSING, POLICY AND DEMOGRAPHIC IMPERATIVES

Housing may present the most difficult challenge facing Orange County's growth. In the period following World War II to the early 1970s, housing was little more expensive in OC and California than in the rest of the nation.[82] Since that time housing has continued to become far more expensive, threatening middle-income lifestyles and making the state and the county far less attractive to domestic migrants, despite the incomparable physical attractions.[83]

To impact these trends, California planning policies need to change, but this seems unlikely to change in the near future. Indeed, the state regulatory environment seems poised to do the opposite, with ever stricter controls being imposed. Regulatory reform, not more of the same, is critical to bringing down house cost, particularly by opening land to development where possible and stream-lining the process of getting approvals.[84]

Perhaps the best chance for new development, particularly for single family housing, will be the Inland Empire, where so many people commute to Orange County from. This could enhance Orange County's housing affordability, and ease the recruitment and retention of younger workers.

It is important to acknowledge that apartments, whether rented or owned, are not "substitutes" for single family housing, particularly for young families. Areas that are dominated by single family residences, both here and around the country, often resist move to impose more density on their communities.[85] In many cases, more intelligent, planned single family and townhouse developments may be more attractive to locals and better fit market needs.[86]

IN THE END, IT'S ALL ABOUT THE ECONOMY — AND A VISION.

Given the likelihood that housing prices will remain high, certainly by national standards, Orange County's future prosperity will depend on the creation of high-wage, high-skill jobs. This is an area where, as Chapman's Jim Doti has pointed out, and we have reaffirmed, the County is now falling behind — both compared to elite regions like Silicon Valley as well as the up-in-comers in Texas, the South and the Intermountain West.

To be sure, Orange County is not failing in the way we associate with a city of Detroit, or even Los Angeles. But the county's momentum has slowed and may be even deteriorating. Eventually this will impact real estate inflation, which is the primary source of the area's oft-cited "boom", creating nearly one-third of all new jobs in 2014.[87]


LEASING
LEASING
Village Dr
Malibu

Theoretically Orange County could follow the current real-estate dominated pattern for several years. Yet ultimately the real estate sector cannot carry the economy, particularly outside of the coastal areas which, due to their climate and natural beauty, can lure the ultra-wealthy here and abroad.[88] Our contention is that once this narcotic wears off, the county will be faced with some dire choices about its long term trajectory.

We believe the people and businesses of Orange County deserve an approach that gives the next generation an opportunity for a future here. The enormous attractions of the area — family neighborhoods, a glorious climate, attractive topography, diversity, a relatively well functioning freeway system and good schools—still exist. What is missing now is a strategy to expand high wage job sectors, particularly in areas such as data analytics, technology, business services, precision manufacturing as well as arts and design.

We do not pretend that we know all the answers to Orange County's challenges, but it is clear that the county as of now lacks a compelling strategic vision. To be sure, there are sporadic efforts in important areas, such as improving roads or developing the arts, but far less emphasis on building up the image of area as a vital, creative business center. This is made more difficult by the lack of major media, particularly electronic, in the area. For all of its technological resources and cultural dynamism, the world seems to know little of our county's potential outside of Disneyland, the libidinal appeals of Real Housewives and the enduring appeal of the surfer culture.

There even seems little knowledge of what the people who live here actually want, or what companies who could potentially re-locate to Orange County might need. It is doubtful that many of the approaches now being pushed — notably massive densification — would resonate with either companies or citizens. Our economic potential seems largely invisible to the outside world. This could be dangerous in an increasingly competitive world in which other regions, and countries, market and study themselves, and sometimes even confront unpleasant truths.

Ultimately, we have to recognize that our next phase of growth — if it is to occur — will not occur organically as it did in previous decades. Market conditions have changed considerably. High paying jobs (the only way people can afford to live in high cost houses, such as in the OC) are increasingly scarce. Many regions in the country and around the

world are targeting these jobs, and most have far lower costs.

At the same time our high end competitors, such as New York, offer a panoply of services, from consulting to plan the costs, logistics and tax breaks for a business to free employee recruitment, to incubators and workspaces, to access to financial and funding sources.[89] Similar approaches can be seen in both In the San Francisco area as well as in the increasingly competitive Puget Sound region.[90] [91]

In contrast, Orange County seems to lack an outward-focused set of services, consulting, finance or marketing campaign to attract companies.[92] Overall there seems to be little focus on recruiting new businesses to the area, as we see from many competitive markets.

Ultimately there is no fundamental reason why Orange County cannot compete successfully with rival regions. None of our competitors — from Dallas-Ft. Worth, Phoenix and New York, to Shanghai, Bangalore or London — possess what we have in terms of climate and quality of life. Yet what those regions outperforming us seem to possess is a vision about their future and the moxie to promote it to the rest of the world. These are characteristics that the OC also needs to adopt, if it wishes to move forward and not recede, like some aging but still attractive dowager, into long-term stagnation and eventual decline.

"Ultimately there is no fundamental reason why Orange County cannot compete successfully with rival regions."

ENDNOTES

1. AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (Cambridge, MA: Harvard University Press, 1994),12-24; Rick L. Weddle, "Research
Triangle Park," Learn NC, 2006,
www.learnnc.org/lp/editions/nchist-recent/6177; Lisa Hartenberger, Stuart Davis, Zeynep Tufekci, "A History of High Tech and the Technopolis in Austin," in *Inequity in the Technopolis*, edited by Joseph Straubhaar, Jeremiah Spence, Zeynep Tufekci, and Roberta G. Lentz, 63-83. Austin, University of Texas, 2012.

2. "Welcome to the San Francisco Center for Economic Development," last modified July 29, 2016, http://sfced.org/; New York City Economic Development Corporation, "Services," 2016, http://www.nycedc.com/services; Dallas Economic Development, "Thinking of the U.S.? Think Dallas!" 2016, http://www.dallas-ecodev.org/international/invest-in-dallas/; City of Seattle Office of Economic Development, "Start Your Business," http://www.growseattle.com/start

3. http://www.ocbc.org)

4. http://www.city-data.com/us-cities/The-West/Anaheim-History.html

5. City of Orange, http://www.cityoforange.org/about/history.asp; Chapman University, "Chapman Facts & History," http://www.chapman.edu/about/facts-history/.; Francelia B. Goddard and Allen W. Goddard, "The History of Santa Ana," Santa Ana History, http://www.santaanahistory.com/local_history.html ; City of Fullerton, "History of Fullerton," http://www.ci.fullerton.ca.us/visitors/history_of_fullerton/default.asp

6. Calculated from 1950 Census Volume I. By comparison, by 2010, nearly all of Orange County had become a part of the continuous urbanization of Los Angeles (the Mission Viejo-San Clemente area was excluded

7. Bob Ziebell, Toby Young, John Westcott, Nora Horn, Diann Marsh, Joe Osterman, Doris I. Walker, John Sorensen, and Steve Donaldson, The Orange Blossoms – 50 years of growth in Orange County (Carlsbad, CA: Heritage Media, 2000), 120, 145.

8. Kevin Starr, *California: A History* (New York: Modern Library, 2007), 239.)

9. M. Gottdiener and George Kephart, "The Multinucleated Metropolitan Region: A Comparative Analysis" in Postsuburban California: The Transformation of Orange County since World War II, ed. Rob Kling, Spencer Olin, Mark Poster (Berkeley, University of California Press), 1991, 35.

10. Alan Scott, "The Technology Industry And Territorial Development; The Rise Of The Orange County Complex, 1955 – 1984", *Urban Geography 7*, 1986:30–45.

11. *Postsuburban California*, 2.

12. Christopher Hawthorne, “The Olmstead Brothers plan and what might have been,” Los Angeles Times, November 11, 2011, http://latimesblogs.latimes.com/culturemonster/2011/11/reading-la-the-olmsted-bartholomew-plan-and-what-might-have-been.html; Greg Wise and William Deverell, Eden By Design (Berkeley: University of California Press, 2000). “The Greater Los Angeles County Open Space for Habitat and Recreation Plan,” Greater Los Angeles County Integrated Regional Water Management Plan, 2012, http://www.ladpw.org/wmd/irwmp/docs/Prop84/GLAC_OSHARP_Report_Final.pdf; Peter Harnik, Abby Martin, Tim O’Grady, “2014 City Park Facts,” February 2014, https://www.tpl.org/sites/default/files/files_upload/2014_CityParkFacts.pdf

13. Bill Fulton, The Reluctant Metropolis, Solano Book Press, (Point Arena,CA:1997), p. 9

14. Ray Watson, "The Irvine Company," Raymond L. Watson Papers. MS-R120. University of California, Irvine Libraries. Special Collections and Archives, http://ucispace.lib.uci.edu/bitstream/handle/10575/1710/comm-builder.pdf?sequence=1.

15. Kevin Starr, Coast of Dreams: California on the Edge, 1990–2003, p.115

16. *"Orange County economy stagnates,"* OC Register, June 30, 2016, http://www.ocregister.com/articles/percent-721031-orange-doti.html; “Orange County Forecast Update,” Chapman University’s Economic and Business Review, June 2016.

17. Henry Grabar, "The Biggest Problem with San Francisco's Rent Problems," *Slate*, June 22, 2015, http://www.slate.com/articles/business/metropolis/2015/06/san_francisco_rent_crisis_the_solution_isn_t_in_the_city_it_s_in_the_suburbs.html; Wendell Cox, "2010 MAJOR METROPOLITAN AREA & PRINCIPAL URBAN AREA (URBANIZED AREA) POPULATION & DENSITY," Demographia, http://demographia.com/db-msauza2010.pdf.

18. Silicon Beach,” Curbed Los Angeles, 2016, http://la.curbed.com/silicon-beach.

19. Ann Markusen, “Cultural Planning in the Creative City”, Paper presented at the annual American Collegiate Schools of Planning meetings, Ft. Worth, Texas, November 12, 2006. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.460.8123&rep=rep1&type=pdf

20. “2015 Otis Report on the Creative Economy”, Otis College of Art and Design, February 2016

21. Joel Kotkin and Michael Shires, “The Cities Creating the Most White-Collar Jobs,” New Geography, July 17, 2015, http://www.newgeography.com/content/004993-the-cities-creating-the-most-white-collar-jobs.

22. Joel Kotkin and Michael Shires, “The Cities Creating the Most White-Collar Jobs,” New Geography, July 17, 2015, http://www.newgeography.com/content/004993-the-cities-creating-the-most-white-collar-jobs.

23. Kevin Starr, Coast of Dreams (New York: Vintage Books, 2006), 235.

24. Coast of Dreams, 235.

25. Morris Newman, “Office Fallout in Orange County,” National Real Estate Investor, February 1, 2008, http://nreionline.com/office/office-fallout-orange-county.

26. Chapman University, "Center for Demographics and Policy," 2016, http://www.chapman.edu/wilkinson/research-centers/demographics-policy/index.aspx.

27. Steven Greenhut, "California Climate Policies Chilling Housing Growth," reason.com, December 11, 2015, https://reason.com/archives/2015/12/11/california-climate-policies-chilling-hou.

28. Krishna Rao, "The Rent is Too Damn High," Zillow, April 15, 2015, http://www.zillow.com/research/rent-affordability-2013q4-6681/.

29. Megan Bolton, Elina Bravve, Emily Miller, Sheila Crowley, Ellen Errico, "Out of Reach 2015," National Low Income Housing Coalition, 2015, http://nlihc.org/sites/default/files/oor/OOR_2015_FULL.pdf.

30. Alvin Toffler, The Third Wave (New York: Morrow, 1980), 353.

31. 2015 Census Bureau population estimates.

32. Calculated from 1950 Census Reports, Volume II.

33. Kfir Mordechay, "Vast Changes and An Uneasy Future," The Civil Rights Project, April 2014, https://civilrightsproject.ucla.edu/research/metro-and-regional-inequalities/lasanti-project-los-angeles-sandiego-tijuana/vast-changes-and-an-uneasy-future-racial-and-regional-inequality-in-southern-california/mordechayi-uneasy-future-lasantai-2014.pdf.

34. 1970 census data as reported in Kfir Mordechay, "Vast Changes and an Uneasy Future: Racial and Regional Inequality in Southern California," The Civil Rights Project, April 2014, https://civilrightsproject.ucla.edu/research/metro-and-regional-inequalities/lasanti-project-los-angeles-san-diego-tijuana/vast-changes-and-an-uneasy-future-racial-and-regional-inequality-in-southern-california/mordechayi-uneasy-future-lasantai-2014.pdf.

35. Among those reporting one race.

36. Calculated from 1970 and 1980 census reports.

37. 2015 Census Bureau Population Estimates

38.Charles Lam, "Asian-American Foodies Are Changing the Way Orange County-and the Nation-Eats," OC Weekly, September 24, 2015, http://blogs.ocweekly.com/stickaforkinit/2015/09/asian-american_foodies_are_changing_the_way_orange_county--and_the_nation--eats.php

39. Jamie Martinez Wood, "Little Arabia: Home Away From Home," Visit Anaheim, July 23, 2014, http://blog.visitanaheim.org/blog-post/2014/07/23/little-arabia-home-away-home; Eric Brightwell, "Exploring Anaheim's Little Arabia," KCET, July 9, 2014, http://www.kcet.org/socal/departures/columns/block-by-block/exploring-anaheims-little-arabia.html; El Centro Cultural De Mexico, "El Centro Cultural De Mexico – Mission," http://elcentroculturaldemexico.org/.

40. Nancy Luna and Heather Goldin, "Dining out takes a new spin with food halls invading SoCal," The Orange County Register, August 7, 2014, http://www.ocregister.com/articles/food-630499-market-union.html\; "OC Night Market," 2016, http://www.ocnightmarket.com/.

41. Kelly Puente, "Orange County sees 5% increase in homeless population," The Orange County Register, August 1, 2015, http://www.ocregister.com/articles/homeless-675363-percent-county.html.

42. Margot Roosevelt, "Orange County's income gap: the rich earn 11 times more than the poorest," The Orange County Register, May 20, 206, http://www.ocregister.com/articles/percent-716282-income-report.html.

43. Betsy Baum Block, Henry Gascon, Peter Manzo, and Adam D. Parker, "Struggling to Get By: The Real Cost Measure in California 2015," United Ways of California, 2015, https://www.unitedwaysca.org/images/StrugglingToGetBy/Struggling_to_Get_By.pdf, 36-37.

44. "Struggling to Get By,"103-3.

45. Calculated from State Department of Finance Projections: 2010-2060, http://www.dof.ca.gov/Forecasting/Demographics/Projections/documents/P-1_Total_CAProj_2010-2060_5-Year.xls.

46. Janet Viveiros and Maya Brennan, "Aging in Every Place: Supportive Service Programs for High and Low Density Communities," Center for Housing Policy, March 2014, http://media.wix.com/ugd/19cfbe_9861425bab344338b13c416fa8e3b6ed.pdf; Sarah Harper, "Economic and social implications of aging societies," Science 346 (October 2014), http://science.sciencemag.org/content/346/6209/587.full.

47. "Age Invaders," The Economist, April 26, 2014, http://www.economist.com/news/briefing/21601248-generation-old-people-about-change-global-economy-they-will-not-all-do-so.

48. Martin Wisckol and Keegan Kyle, "4 reasons some voters are more motivated," The Orange County Register, August 8, 2014, http://www.ocregister.com/articles/turnout-629320-county-lowest.html; Rebecca Kheel, "Majority supported Orange Unified school board – except in Villa Park," The Orange County Register, November 25, 2014, http://www.ocregister.com/articles/percent-643280-bond-measure.htmll; Joel Kotkin, "The Rise of Post-Familialism: Humanity's Future?" Civil Service College Singapore, 2012, http://www.newgeography.com/files/The%20Rise%20of%20Post-Familialism%20(ISBN9789810738976).pdf.

49. Marilyn Kalfus, "Young, Poor and Leaving O.C.", Orange County Register, April 30, 2016, print.

50. Jonathan Lanser, "Is the OC Dream Dead?", Orange County Register, Feb. 7, 2016, print.

51. Alissa Walker, "Millennials Will Live in Cities Unlike Anything We've Ever Seen Before," Gizmodo, April 29, 2015, http://gizmodo.com/millennials-will-live-in-cities-unlike-anything-weve-se-1716074100.

52. Morley Winograd and Michael D. Hais, "The Millennial Metropolis," New Geography, April 19, 2010, http://www.newgeography.com/content/001511-the-millennial-metropolis; Jeremy Burbank and Louise Keely, "New Millennials and their Homes", Demand Institute, September 16, 2014, http://demandinstitute.org/blog/millennials-and-their-homes; M. Leanne Lachman and Deborah L. Brett, "Gen Y and Housing: What they want and where they want it", Urban Land Institute, 2015, http://uli.org/wp-content/uploads/ULI-Documents/Gen-Y-and-Housing.pdf; Kris Hudson, "Generation Y Prefers Suburban Home Over City Condo," The Wall Street Journal, January 21, 2015, http://www.wsj.com/articles/millennials-prefer-single-family-homes-in-the-suburbs-1421896797.

53. Patrick Sisson, "Millennials Look to the Suburbs, Not Cities, for First Homes," Curbed, June 21, 2016, http://www.curbed.com/2016/6/21/11956516/millennial-first-time-home-trends-suburbs.

54. Gillian B. White, "Most Millennials Want to Own Homes," The Atlantic, June 19, 2015, http://www.theatlantic.com/business/archive/2015/06/millennials-housing-purchase-money/396293/.

55. Qualifying income (with 10% down payment)" data from National Association of Realtors & actual wage data from California Employment Development Dept. 56. Derived from 2014 American Community Survey.

56. Jed Kolko, "Urban Headwinds, Suburban Tailwinds", *http://www.trulia.com*, January 22, 2015.

57. Jonathan Lansner, "Where are the nation's most financially stressed homeowners? O.C. and L.A.," The Orange County Register, June 26, 2016, http://www.ocregister.com/articles/percent-720592-housing-inland.html.

58. Bill Hethcock, "Here's the main reason Toyota is moving from California to Texas," Dallas Business Journal, December 14, 2015, http://www.bizjournals.com/dallas/blog/2015/12/heres-the-main-reason-toyota-is-moving-from.html?surround=etf&ana=e_article.

59. Joseph Vranich, "California Companies Head for Greatness – Outside of California," New Geography, November 19, 2015, http://www.newgeography.com/content/005093-california-companies-head-greatness-outside-california; Joseph Vranich, "California Business Departures: An Eight-Year Review 2008-2015," Spectrum Location Solutions, January 14, 2016, http://www.spectrumlocationsolutions.com/pdf/Businesses-Leave-California-.pdf.

60. "Here's the main reason Toyota is moving from California to Texas"; Wendell Cox, "Outer California: Sacramento Sends Jobs (and people) to Nashville," New Geography, June 30, 2016, http://www.newgeography.com/content/005308-outer-california-sacramento-sends-jobs-and-people-nashville.

61. Mac Taylor, "California's High Housing Costs: Causes and Consequences," Legislative Analyst's Office, March 17, 2015, http://www.lao.ca.gov/reports/2015/finance/housing-costs/housing-costs.aspx.

62. George Avalos, "One-third of Bay Area residents hope to leave soon, poll finds," The Mercury News, May 2, 2016, http://www.mercurynews.com/business/ci_29837065/one-third-bay-area-residents-hope-leave-soon.

63. Jane Jacobs, The Economy of Cities (New York: Vintage, 1970), 136-137.

64. Anna Lee Saxenian, Regional Advantage: Culture and Cooperation in Silicon Valley and Route 128 (Cambridge, MA: Harvard University Press, 1995), 32-3.

65. Lauren Williams, "To keep top talent, perks and projects take center stage at O.C. tech startups," The Orange County Register, November 6, 2015, http://www.ocregister.com/articles/company-690895-tech-verys.html.

66. Orange County Business Council, "2015 Orange County Workforce Housing Scorecard," http://www.ocbc.org/wp-content/uploads/2015-Housing-Scorecard-FINAL-PAGES-3.20.15-small.pdf; Wendell Cox, "Density is not the issue: The Urban Scaling Research," New Geography, July 30, 2012, http://www.newgeography.com/content/002987-density-not-issue-the-urban-scaling-research.

67. Scott Donaldson, "City and Country: Marriage Proposals", in New Towns and the Suburban Dream, ed. Irving Lewis Allen (Port Washington, NY: Kennikat Press, 1977), 101.

68. Calculated from American Community Survey, 2013, one year.

69. Calculated from Census Bureau County Business Pattern data at the Zip code (ZCTA) level using the City Sector Model. See: http://www.demographia.com/csm2015.pdf.

70. Wendell Cox, "Dispersion and Concentration in Metropolitan Employement," New Geography, May 13, 2015, http://www.newgeography.com/content/004921-dispersion-and-concentration-metropolitan-employment.

71. Estimated from 2013 data from the United States Department of Transportation and Caltrans.

72. Wendell Cox, "Problems in the Orange County Grand Jury Light Rail Report," New Geography, May 25, 2016, http://www.newgeography.com/content/005266-problems-orange-county-grand-jury-light-rail-report.

73. Wendell Cox, "New York's Incredible Subway," New Geography, May 19, 2015, http://www.newgeography.com/content/005255-new-yorks-incredible-subway.

74. Even in the New York metropolitan area, the share of travel by cars approaches 90 percent.

75. Wendell Cox, "Evaluating Urban Rail," New Geography, December 5, 2014, http://www.newgeography.com/content/004789-evaluating-urban-rail.

76. Laura J. Nelson and Dan Weikel, "Billions spent, but fewer people are using public transportation in Southern California," The Los Angeles Times, January 27, 2016, http://www.latimes.com/local/california/la-me-ridership-slump-20160127-story.html; Wendell Cox, "Just How Much Has Los Angeles Transit Ridership Fallen?" *New Geography*, February 17, 2016, http://www.newgeography.com/content/005171-just-how-much-has-los-angelestransit-ridership-fallen.

77. Art Marroquin, "Anaheim's ARTIC sees $2 million deficit during first 6 months," The Orange County Register, April 18, 2015, http://www.ocregister.com/articles/city-658476-artic-revenue.html.

78. "Santa Ana and Garden Grove Fixed Guideway Corridor: Alternatives Analysis Report," Santa Ana Transit Vision, April 2014, http://santaanatransitvision.com/pdf/AA_Report.pdf.

79. Joseph Schweiterman, "Uberpool & Lyftline: How the new carpools will change travel," New Geography, July 28, 2016, http://www.newgeography.com/content/005338-uberpool-lyftline-how-new-carpools-will-change-travel.

80. California Department of Education: Data Reporting Office, "Cohort Outcome Multi-Year Summary: Orange County Results," http://data1.cde.ca.gov/dataquest/cohortmulti/CohortMultiYear.aspx?agglevel=O&cdscode=30000000000000; California Department of Education: Data Reporting Office, "Cohort Outcome Multi-Year Summary: Los Angeles Results," http://data1.cde.ca.gov/dataquest/cohortmulti/CohortMultiYear.aspx?agglevel=O&cdscode=19000000000000; "AP Score Distributions by Total and Ethnic Group," College Board, 2015, http://media.collegeboard.com/digitalServices/misc/ap/california-summary-2015.xlsx; "Advanced Placement (AP) Test Report: 2014-2015 Orange County Level Scores," California Department of Education: Analysis, Measurement, and Accountability Reporting Division, http://data1.cde.ca.gov/dataquest/satactap/ap.aspx?cyear=2014-15&cchoice=AP2b&year=1415&cdscode=30000000000000&cLevel=County&ctopic=sat&level=County; "Advanced Placement (AP) Test Report: 2014-2015 Los Angeles Scores," California Department of Education: Analysis, Measurement, and Accountability Reporting Division, http://data1.cde.ca.gov/dataquest/satactap/ap.aspx?cyear=2014-15&cchoice=AP2b&year=1415&cdscode=19000000000000&cLevel=County&ctopic=sat&level=County.

81. Mike Davis, Ecology of Fear: Los Angeles and the Imagination of Disaster (New York: Metropolitan Books, 1998), 23; Dave Rodriguez, "Huntington Beach desalination plant a matter of environment justice," The Orange County Register, July 15, 2016, http://www.ocregister.com/articles/water-722529-drought-desalination.html.

82. William A. Fischel, Regulatory Takings: Law, Economics, and Politics (Cambridge, MA: Harvard University Press, 1995).

83. "California's High Housing Costs."

84. For example, according to Buildingcost.net, the construction cost (land excluded) for an identical 2,000 square foot standard house with a two car garage in Orange County (Irvine) is $253,500. In California's most expensive housing market, San Jose, the cost would be $262,300. In Houston, the cost would be $256,000. Thus, the construction cost in San Jose is 2 percent higher than in Houston. In contrast, the median house price in the first quarter of 2016 in Orange County was 712,900, in San Jose $970,000 and in Houston $208,000. The median priced house in San Jose is thus more than 350 percent higher than the median priced house in Houston. The difference is largely the cost of land, which includes local development fees (house price data from the National Association of Realtors, http://www.realtor.org/sites/default/files/reports/2016/embargoes/2016-q1-metro-home-prices/metro-home-prices-q1-2016-single-family-2016-05-09.pdf).

85. David B. Resnik, “Urban Sprawl, Smart Growth, and Deliberative Democracy,” Am J Public Health 100 (2010): 1852-1856; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2936977/; Kevin Brass, “San Diego Wrestles with Densification,” Urban Land, May 4, 2015, http://urbanland.uli.org/planning-design/san-diego-moves-forward-one-paseo/; Greg Mellen, “Huntington Beach scraps senior and high-density housing plans,” The Orange County Register, February 12, 2016, http://www.ocregister.com/articles/beach-703553-housing-city.html.

86. Peter Gordon and Harry W. Richardson, “The Sprawl Debate: Let Markets Plan,” PUBLIUS, October 5, 2001, https://lusk.usc.edu/sites/default/files/working_papers/wp_2001-1002.pdf.

87. Jonathan Lansner, “O.C. real estate bosses add the most workers in a decade,” The Orange County Register, March 14, 2016, http://www.ocregister.com/articles/real-707956-percent-estate.html.

88. Laura Kusisto and Alyssa Abkowitz, “Chinese Pull Back From U.S. Property Investments,” The Wall Street Journal, November 27, 2015, http://www.wsj.com/articles/chinese-pull-back-from-u-s-property-investments-1448649226; “Foreign Direct Investment in Southern California,” Los Angeles Economic Development Corporation, 2016, http://laedc.org/wp-content/uploads/2016/06/WTCLA-FDI-FINAL-6.16.pdf.

89. New York City Economic Development Corporation, “Services.”

90. Economic Development Council of Seattle & King County, “Resources,” http://www.edc-seaking.org/service/resources/resources.

91. “Welcome to thew San Francisco Center for Economic Development.”

92. “The 2013-2018 Comprehensive Economic Development Strategy,” 76-77.

Design Notes

OC MODEL: A Vision for Orange County's Future and the graphics utilize the following:

To achieve visual harmony a modified version of the grid Jan Tschichold conceived for his book *Typographie* was employed.

MINION PRO Chapman's serif family, is a digital typeface designed by Robert Slimbach in 1990 for Adobe Systems. The name comes from the traditional naming system for type sizes, in which minion is between nonpareil and brevier. It is inspired by late Renaissance-era type.

FUTURA is one of Chapman's san serif family. Futura is a geometric sans-serif typeface designed in 1927[1] by Paul Renner. It was designed as a contribution on the New Frankfurt-project. It is based on geometric shapes that became representative of visual elements of the Bauhaus design style of 1919–33. Futura has an appearance of efficiency and forwardness. Although Renner was not associated with the Bauhaus, he shared many of its idioms and believed that a modern typeface should express modern models, rather than be a revival of a previous design. Wikipedia

Front Cover and inside front cover: courtesy of Orange County Archives

Back Cover, inside back cover, page 41 and 42: Lamb Studios, Tom Lamb

Book exterior and interior design by Chapman University professor Eric Chimenti. His work has won a Gold Advertising Award, been selected for inclusion into *LogoLounge: Master Library, Volume 2 and LogoLounge Book 9*, and been featured on *visual.ly*, the world's largest community of infographics and data visualization. He has 17 years of experience in the communication design industry. To view a client list and see additional samples please visit www.behance.net/ericchimenti.

Professor Chimenti is also the founder and head of Chapman's Ideation Lab that supports undergraduate and faculty research by providing creative visualization and presentation support from appropriately qualified Chapman University undergraduate students. Services include creative writing, video, photography, data visualization, and all aspects of design. The students specialize in the design and presentation of complex communication problems.

CHAPMAN UNIVERSITY | WILKINSON COLLEGE *of Arts, Humanities, and Social Sciences*


7725
GATEWAY

Orange County's high housing costs make it increasingly difficult for young families and working people to settle permanently in Orange County. Given that prices will likely remain relatively high, the only solution lies in creating high wage jobs. The problem: we are not creating them fast enough.

The only way to address this issue is to develop a strong, pro-active economic strategy. The previous generation of business leaders are either retiring or selling their firms to companies outside the region. Much of the county —particularly along the coast — faces the prospect of becoming largely retirement communities while young people, especially families, look for a future elsewhere.

Right now much of our job creation depends on inflated real estate and lower wage industries. This is not a promising combination. The good news is that Orange County retains a well-educated, technically gifted population. To expand and grow this workforce in the future, we need to nurture the next generation of technology, science and professional services companies. The region's entrepreneurial community, while growing, cannot produce enough well-paying jobs to meet the needs of the community. We also need to convince existing, larger companies to expand in Orange County, a task which will require a level of coordination, commitment and funding that has yet to emerge.

Any workable strategy needs to be based on what we call the OC model. Our dispersed, and increasingly diverse urban centers—not one dense central core—should be regarded as an asset to build upon. Dense urban development and rail transit, favored by many planners, does not magically spark strong economic performance as is evident from the experience of our large neighbor, Los Angeles.

This report presents detailed data about the state of the economy, population base, and employment picture of Orange County and the key metro areas it competes with for jobs. The implications of the data are inescapable: Orange County, despite its great natural blessings, needs a new strategy and a focused commitment to execute it.

CENTER FOR
DEMOGRAPHICS & POLICY
RESEARCH BRIEF
CHAPMAN UNIVERSITY