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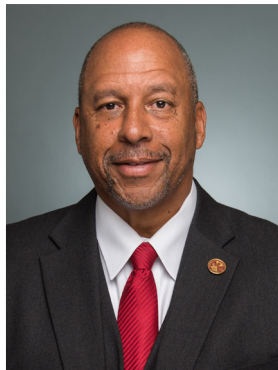
SOUTH BAY
ECONOMIC
FORECAST
&
INDUSTRY
OUTLOOK

2019

CSUDH

MESSAGE FROM
THE UNIVERSITY PRESIDENT

Greetings.

Since 2015, California State University, Dominguez Hills has presented the South Bay Economic Forecast conference, with the goal of providing a focused look at the current state of the region's economy and forecast for the coming year. Prepared in partnership with the UCLA Anderson School, the 2019-20 South Bay Economic Forecast is a comprehensive report of data and analysis on key industries that make up our dynamic South Bay region. The forecast is designed to provide important contextual information for the continued development and economic success of our region, and has become a go-to resource for industry leaders, researchers, and journalists.

The report testifies to the role higher education plays in the economic vigor and ingenuity found within the South Bay's robust workforce. Jobs in technology are increasingly becoming a pillar of the local economy as ambitious companies set their sights on everything from fighting cancer to launching rockets from in-flight 747s. The one thing all these diverse high-tech firms have in common is a need for a highly skilled and culturally competent workforce of the kind that we are developing at CSU Dominguez Hills.

CSUDH works closely with companies to develop academic programs and degrees that provide our graduates with the knowledge and skills necessary to succeed in their chosen field. In these rapidly changing times, keeping up with current industry trends is more vital than ever. We are proud of the role our university plays in helping drive our region forward into an exciting future.

I am confident you will find the South Bay Economic Forecast report richly detailed, informative, and valuable. It is an honor to share it with you, and we look forward to continuing to support the growth and success of our vibrant South Bay region.

Sincerely,

Thomas A. Parham, Ph.D.
President, California State University, Dominguez Hills

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About the Author

William Yu
Economist, UCLA Anderson Forecast

William Yu joined the UCLA Anderson Forecast in 2011 as an economist. At the UCLA Anderson Forecast he focuses on economic modeling, forecasting, and the Los Angeles economy. He also conducts research and forecasts on China's economy and its relationship with the U.S. economy. His research interests include a wide range of economic and financial issues, such as time series econometrics, data analytics, stocks, bonds, real estate, commodity price dynamics, human capital, and innovation.

Welcome to the South Bay Economic Forecast and Industry Outlook

About the South Bay Economics Institute

The South Bay Economics Institute at CSUDH aims to lead the South Bay region with innovative and forward-thinking economics education and research. The South Bay Economics Institute serves the College of Business Administration and Public Policy faculty and students, as well as community stakeholders by:

Developing CSUDH economics curriculum and teaching while incorporating proven high-impact practices;

Engaging our diverse student body in economic analysis projects through mentoring programs, guest speakers, and community outreach opportunities;

Facilitating faculty development through economics research resources, grant writing deliverables, and local business and government community engagement.

About California State University, Dominguez Hills

California State University, Dominguez Hills was founded in 1960 and permanently relocated to Carson in 1965 in response to the Watts Rebellion and the need to increase access to higher education for Southern California residents. For over 50 years, CSU Dominguez Hills has served a diverse community of learners and educators collaborating to change lives and communities for the better. CSU Dominguez Hills is committed to connecting its students to a higher-quality, transformative education while providing the L.A. region with a vital resource for talent, knowledge, skills, and leadership needed to thrive today and tomorrow. Of the university's over 100,000 alumni, 65 percent live and work within 25 miles of campus.

Jose N. Martinez
Co-Director
South Bay Economics Institute
California State University, Dominguez Hills

Fynnwin Prager
Co-Director
South Bay Economics Institute
California State University, Dominguez Hills

South Bay[1] Economic Forecast and Industry Outlook 2019-2020

By William Yu, Economist, UCLA Anderson Forecast

U.S. ECONOMY OVERVIEW

The U.S. economy is slowing, but given the trade tensions with China and a weaker outlook around the globe, the growth rate is adequate. The U.S. Q2 GDP growth rate was at 2%, down from 3.1% in Q1. Payroll job growth remains 1.4% year-over-year in August, as shown in Figure 1. In an attempt to prevent further economic deceleration, the Federal Reserve cut the federal fund rates target by 0.25% (from the previous target range of 2%) to 2.25% last September.

Some might wonder if in our full-employment economy, the Fed's expansionary monetary policy will fuel the stock market and cause another bubble. There are two justifications presented as a defense for the Fed's policy. First, the headline and core inflation are running around 2%, well anchored within the Fed's comfort zone. This provides room for more rate cuts. Second, the Federal Fund rate is now higher than the 10-year Treasury rates. We predict more rate cuts will follow. The consequence of the Fed's actions can be summarized in two broad categories: (1) successful and swift adjustments like in 1995 and 1998; (2) unsuccessful and belated adjustments like 2000 and 2007, which were followed by recessions. In addition, we believe that there will be more trade battles between the U.S. and China in the future before both sides will compromise. For instance, without an agreement between the U.S. and China, by the end of 2019, almost all U.S. imports of goods from China are expected to have tariffs of either 15% or 30%. As a result, irrational exuberance and asset bubbles are unlikely to grow despite low interest rates. Moreover, housing markets have recently experienced a soft landing after a good six years of growth (2013 to 2018). In fact, many wonder if a recession will finally arrive by next year

amid the continuing inverted yield curve (10-year minus three-month Treasury). Given the risks of an escalation in the trade wars, it is possible. Note that even if a recession comes in the next year or two, it will likely not be as severe as the Great Recession in 2008 because we don't see the same serious imbalances as before.

CALIFORNIA ECONOMY OVERVIEW

California's economy has consistently been performing better than the nation between 2012 to 2017. As shown below in Figure 1, the year-over-year growth rate of payroll employment in California (orange line) has been higher than that in the U.S. (blue line) until 2019. The main reason is that California is the

Figure 1   Payroll Employment Year-over-year Growth Rates in the U.S. and California
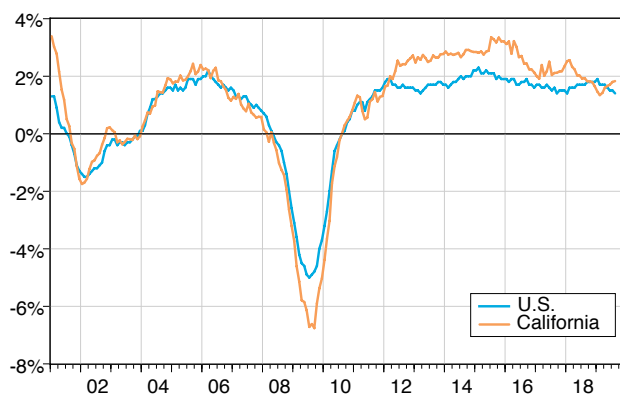
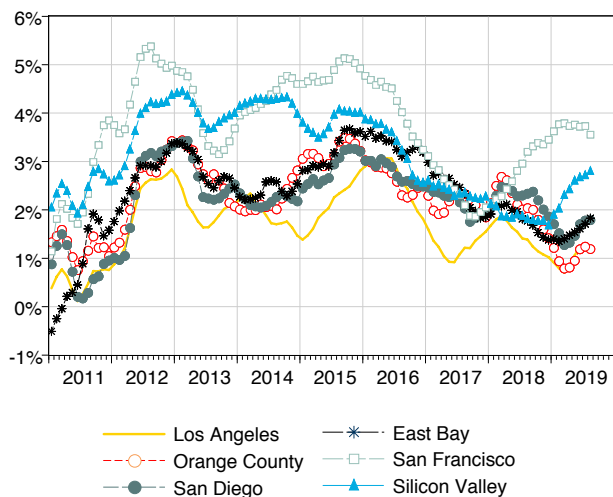Sources: Bureau of Labor Statistics and California Employment Development Department

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center of high-tech and innovation both in the country and in the world. The tech industry has done very well during these years. The 3% payroll growth prior to 2015 has slowed down to below 2% growth in California over the past two years, converging to a growth rate similar to the nation.

Figure 2 shows the six major coastal California metros, which account for two-thirds of employment in the state. We can see, by and large, three tiers of regional growth rates: (1) robust growth: San Francisco (San Francisco and San Mateo Counties) and Silicon Valley (Santa Clara County), (2) normal growth: East Bay (Alameda and Contra Costa Counties) and San Diego, and (3) slower growth: Los Angeles and Orange County. Note that these job numbers will be revised early next year and the direction is most likely a downward revision.

There is one major reason for the slowing of California's economy and job growth—full employment. Since the cost of housing has been rising rapidly over the past several years in California, it is more challenging for a business to expand or establish itself because of more expensive rents and wages to compensate and compete for workers. Meanwhile, there has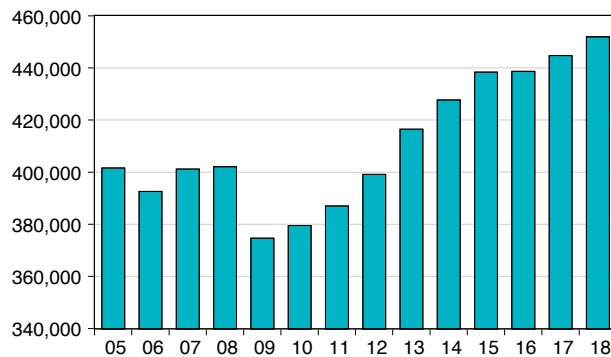 been some outmigration of middle-class residents and retirees from California which has not been offset by international immigration due to the recent changes in immigration policy in the U.S.

The attractiveness of California to highly skilled, technologically competent individuals, in particular in the coastal region, comes from its abundant natural and cultural amenities. Consequently, it has been able to attract these talented, high-skilled, and productive workers throughout the world despite the high cost of housing.
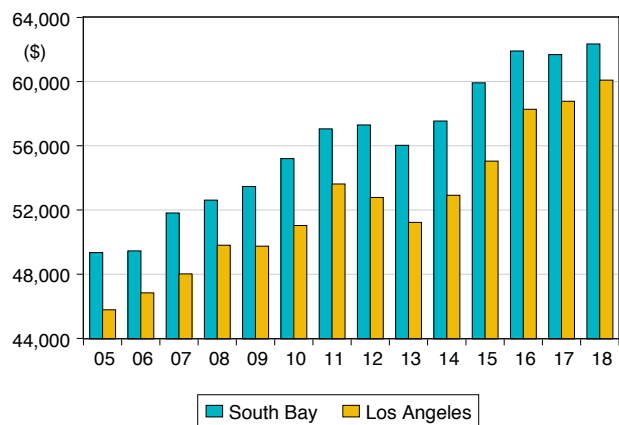
SOUTH BAY ECONOMY AND INDUSTRY OVERVIEW

Figure 3 shows the total payroll jobs in the private sector[2] in the South Bay from 2005 to 2018. The South Bay's economy grew at a steady pace (1.6%) in 2018.[3] In 2018Q3, there were about 452,000 private-sector jobs in the South Bay, which is about one-tenth of L.A.'s workforce or half of San Francisco's metro workforce. Payroll jobs in the South Bay recovered and increased rapidly in 2011 to 2015, slowed down in 2016, but resumed a healthy pace in 2017 and 2018.

Figure 2   Payroll Employment Year-over-year Growth Rates in 6 Coastal California Regions

Source: California Employment Development Department; the year-over-year growth is adjusted by 3-month moving average to remove short-term fluctuations.

Figure 3   Payroll Employment in Private Sector in the South Bay

Source: California Employment Development Department; data for each year is the third quarter of each year from QCEW (Quarterly Census for Employment and Wages)

Source: California Employment Development Department; data for each year is the third quarter of each year from QCEW (Quarterly Census for Employment and Wages) calculated by zip code.

Figure 4 presents the average annual wage of a worker in the South Bay and Los Angeles County from 2005 to 2018. Both regions have seen a steady increase in wages over time except in the period of 2013 and 2014. The average wage in the South Bay ($62,300) was marginally higher than that in L.A. ($60,000) in 2018, reflecting the fact that the jobs in the South Bay required, on average, more human capital and skills than those in the whole of L.A. County on average.

SOUTH BAY INDUSTRY

Here we discuss industry details in the South Bay. Figure 5 lists 16 industries in South Bay, ranked by their total wage payments. The value is directly related to the value added by an industry and represents its significance to the local economy. It is clear to see that the greatest wage bill sector to the South Bay is manufacturing, in particular for aerospace and defense. The total wage bill for manufacturing amounted to $1.48 billion, much higher than the next sector; professional, scientific, and technical services ($0.82 billion). The third sector is health care and social services ($0.61 billion), followed by wholesale trade ($0.5 billion), and transportation and warehousing ($0.43 billion).

Figure 6 shows the payroll employment by sector in the South Bay in 2018. The largest job creator is the manufacturing sector with 62,600 jobs, followed by health care (53,500 jobs), accommodation and food services (42,600), and retail trade (42,300). Figure 7 presents the annual job growth from 2017 to 2018 (red bar) and annual compound growth rate from 2011 to 2018 (yellow bar) by sector. By looking at both, we can see how each sector has been doing in the short-term (latest year) and long-term (7-year period of expansion). The health care and social services sector has had very impressive job growth from 2011 to 2018, averaging 7% per year.

The arts, entertainment, and recreation sector has shown robust growth in past years (17-18: 21%; 11-18: 7.3%) as

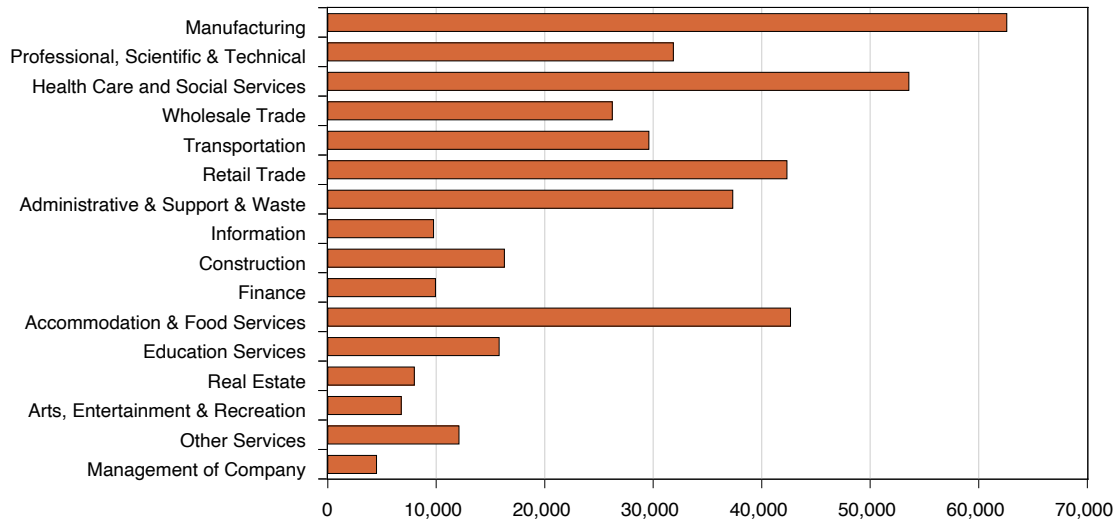Figure 5   Total Wage By Sector in the South Bay, 2018
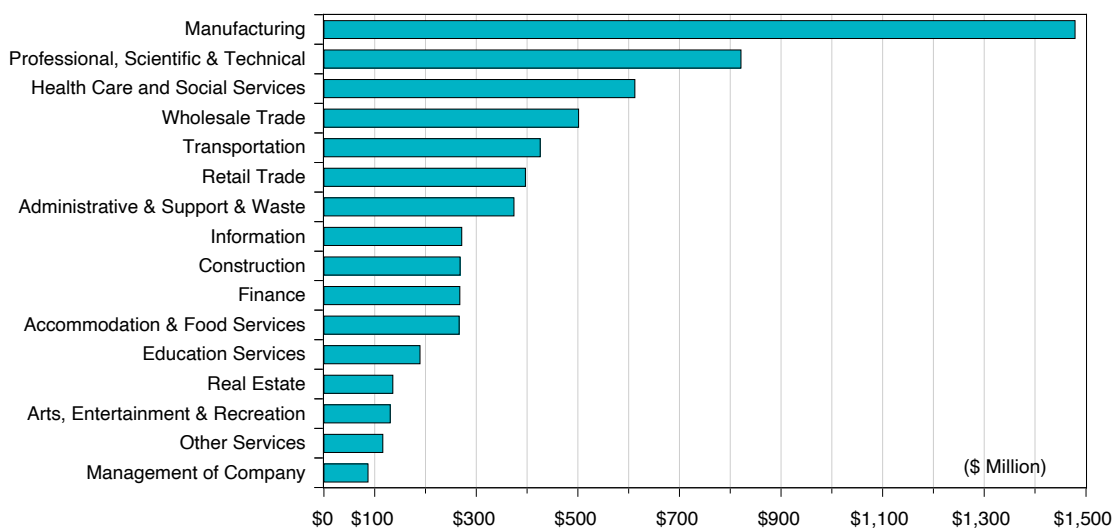
Source: California Employment Development Department; data is the third quarter of 2018 from QCEW (Quarterly Census for Employment and Wages) calculated by zip code.

has administrative and support services (17-18: 20%; 11-18: 3.3%). Even though the professional, scientific, and technical services sector had almost no job growth from 2011 to 2018, it is encouraging to see its strong growth of 5.5% in 2017-18. However, based on the payroll numbers for the entire L.A. County from August 2018 to August 2019,[4] we see resilient growth in the durable goods part of the manufacturing sector: the aerospace sector, which is up 3.4%, from 38,000 to 39,300, and the computer and electronic products sector, which is up 5.3%, from 41,500 to 43,700. The boost in the aerospace industry is due to both the increased defense spending and the demand for commercial aircraft and launch services from the private sector. Since defense spending is not likely to increase in the coming years, given the current fiscal deficit, it will remain a major employer but not a driver of continued growth for the local economy.

Figure 6   Payroll Employment By Sector in the South Bay, 2018

Source: California Employment Development Department; data is the third quarter of 2018 from QCEW (Quarterly Census for Employment and Wages) calculated by zip code.
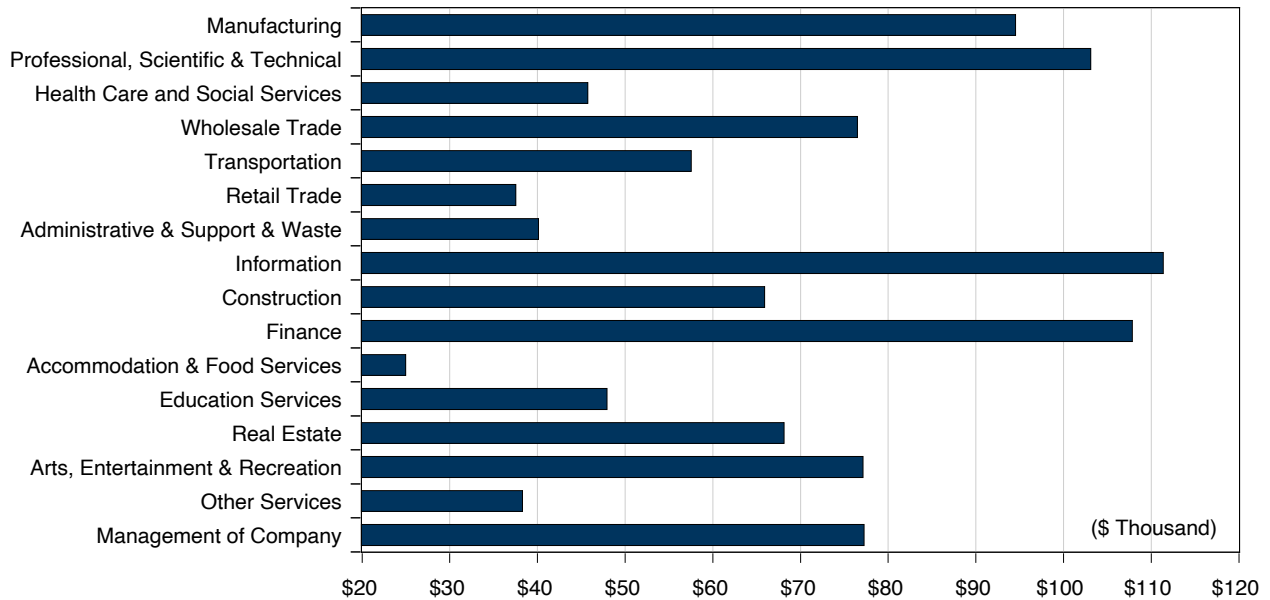
Figure 7   Annual Job Growth 2017-2018 and Annual Compound Growth Rate 2011-2018, By Sector in the South Bay, 2018
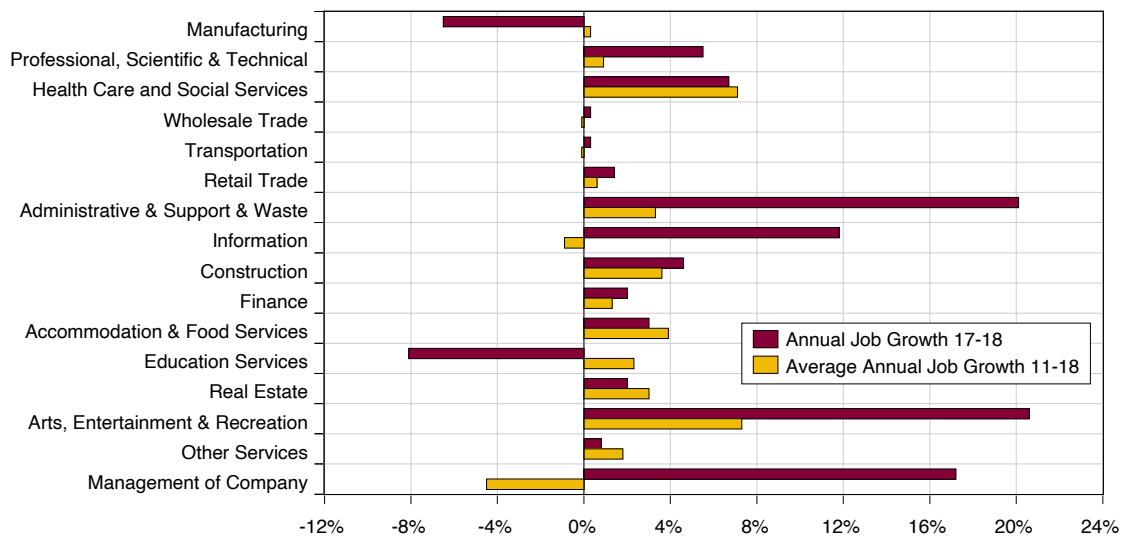
Source: California Employment Development Department; data is the third quarter of 2018 from QCEW (Quarterly Census for Employment and Wages) calculated by zip code.

4. The breakdown of payroll employment to the South Bay is not available at this moment.

Figure 8   Average Annual Wage By Sector in the South Bay, 2018

Source: California Employment Development Department; data is the third quarter of 2018 from QCEW (Quarterly Census for Employment and Wages) calculated by zip code.

Figure 8 displays the average annual wage by sector in the South Bay in 2018. The three highest paying industries are information ($111,000), finance ($108,000), and professional, scientific, and technical services ($103,000). These three sectors require high skills and human capital. The fourth is the pillar of the South Bay: the manufacturing sector with a $95,000 average wage, higher than $91,000 in 2017. Note that there is a wide disparity of average annual wages across industries, from six-figure wages in the aforementioned industries to $46,000 in the health care and social services sector, $37,000 in the retail sector, and $25,000 in the accommodation and food services sector.

Figures 9 to 15 illustrate the percentage of jobs in selected industries over total private-sector jobs by zip code in the South Bay in 2018Q3. The red color means higher than the median percentage, while the blue color represents lower than the median value. The darker the color, the higher (red) the percentage or lower (blue) the percentage. Figure 9 shows the percentage of manufacturing jobs over total jobs. We can see a higher concentration of manufacturing jobs in El Segundo

and Hawthorne, where several world-pioneer aerospace and defense companies are located; companies such as Raytheon, Northrop Grumman, Boeing, SpaceX, and so on. For instance, with the rise of SpaceX, Hawthorne has seen remarkable job growth in recent years; higher than the South Bay and the whole of L.A. County. Though defense spending is not expected to increase, the current level of spending is expected to continue and therefore the South Bay beneficiaries of this procurement should continue to do well.
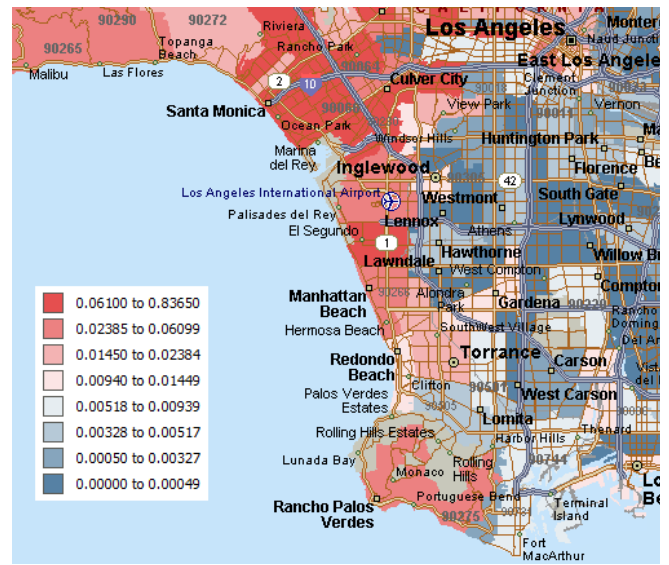
Figure 10 shows the density of professional, scientific, and technical jobs in the South Bay region. El Segundo again leads the region in having the highest concentration of this kind of high-skill and high-tech job, followed by Manhattan Beach, Hermosa Beach, and Torrance. Figure 11 shows the density of information sector jobs. Similar to professional jobs, El Segundo, Manhattan Beach, and Torrance have more of the highest-paying sector jobs. Figure 12 shows the density of finance sector jobs. It has a similar pattern: located near coastal areas (West of Interstate 405), with more concentration in Manhattan Beach.

Figure 9   Percentage of Manufacturing Jobs Over Total Private Jobs
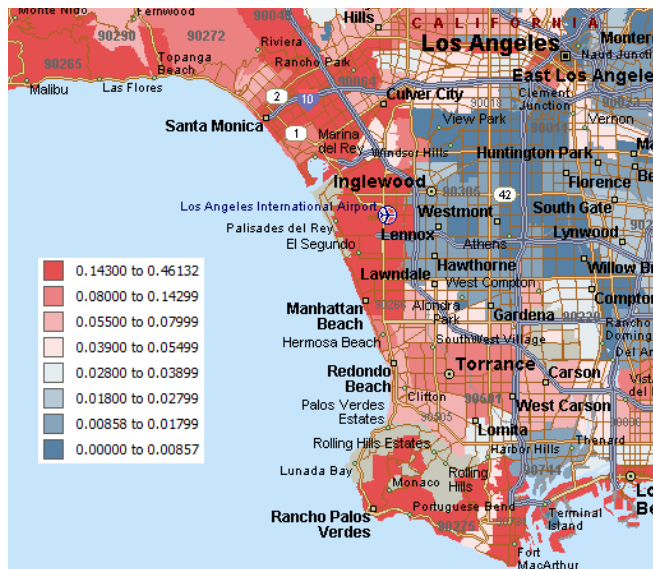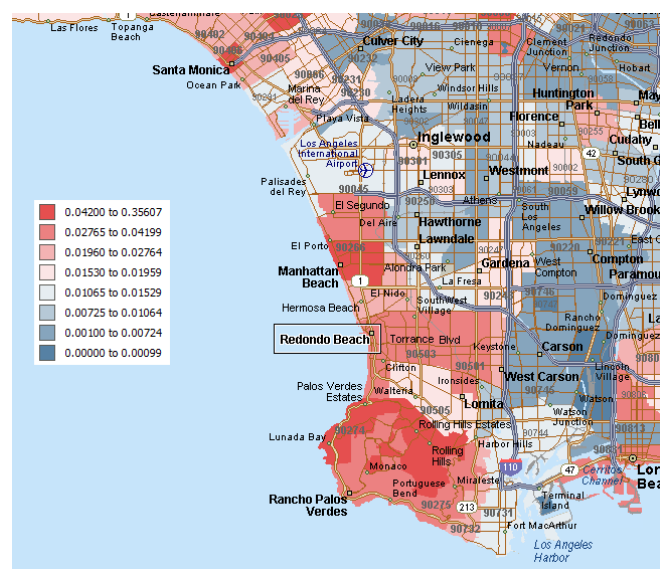   in the South Bay, 2018

Source: California Employment Development Department

Figure 10   Percentage of Professional, Scientific, and Technical Jobs
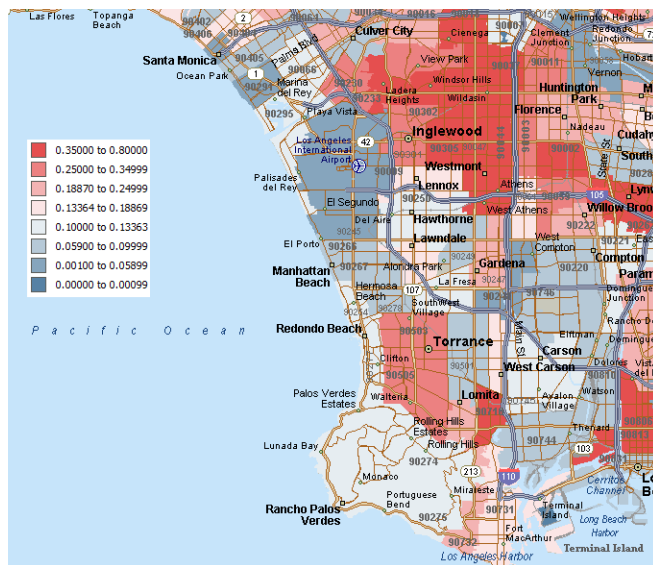   Over Total Private Jobs in the South Bay, 2018
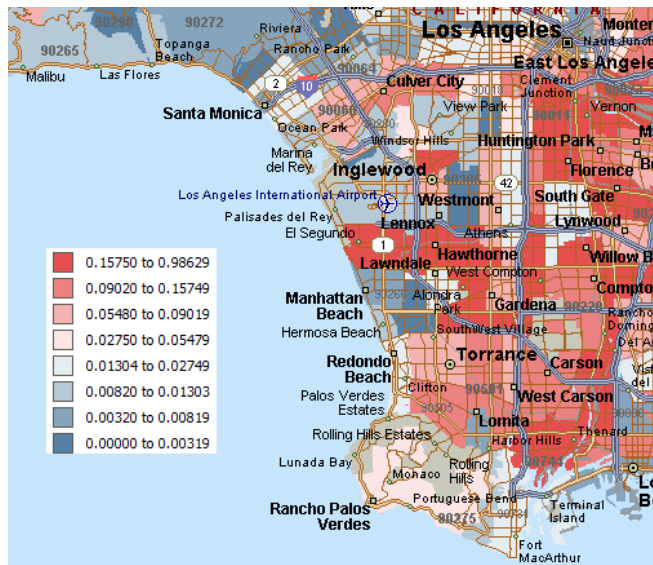
Source: California Employment Development Department

Figure 11   Percentage of Information Jobs Over Total Private Jobs
            in the South Bay, 2018

Source: California Employment Development Department

Figure 12   Percentage of Finance Jobs Over Total Private Jobs
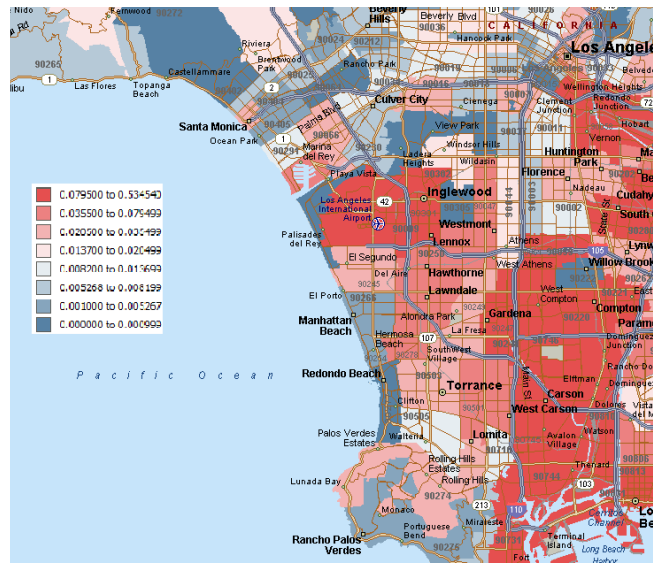   in the South Bay, 2018

Source: California Employment Development Department

Figure 13   Percentage of Health Care and Social Services Jobs Over
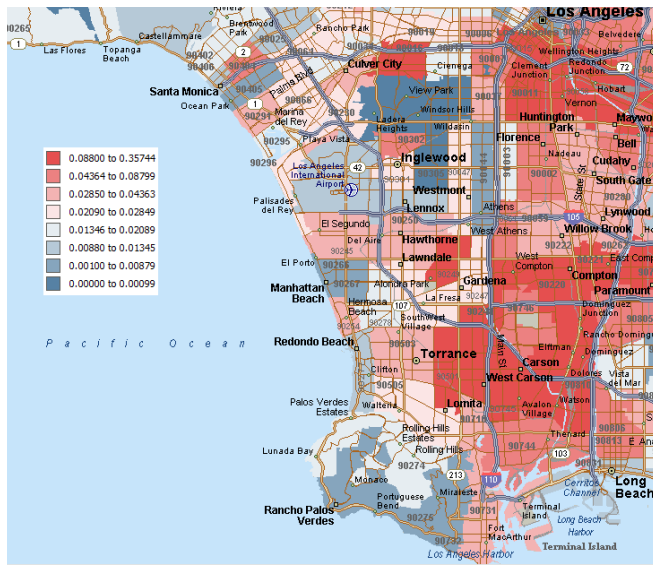Total Private Jobs in the South Bay, 2018

Source: California Employment Development Department

Figure 14   Percentage of Wholesale Trade Jobs Over Total Private Jobs
in the South Bay, 2018

Source: California Employment Development Department

Figure 15   Percentage of Transportation and Warehousing Jobs Over
Total Private Jobs in the South Bay, 2018

Source: California Employment Development Department

Figure 13 shows the density of health care and social services jobs. There is a higher density of these jobs in Inglewood and Torrance. Figure 14 shows the density of wholesale trade jobs. These are more concentrated in the inland part of the South Bay, where rents are less expensive. Figure 15 shows the density of transportation and warehousing jobs, which are centered around LAX, Gardena, Carson, and the Ports of Long Beach and Los Angeles.

STARTUP ACTIVITY

As the southern part of Silicon Beach, the South Bay is also an active place for startup companies and venture capital funding. This is mostly concentrated in four cities (El Segundo, Hawthorne, Torrance, and Inglewood). Table 1 lists the companies with recent exit or funding from all kinds of sources,[5] including venture capital, debt, private equity, and IPO received over the past 3 years. This presents a picture of startup activity in the area:

Table 1   South Bay Startup Funding Activities Over the Past Three Years

Company	Industry	City	Exit Round	Exit Date	Last Funding Round	Last Funding ($M)	Valuation ($M)
SpaceX	Aerospace & Defense	Hawthorne			Corp Minority		18,520
Beyond Meat	Meat & Alternative Proteins	El Segundo	IPO	5/2/2019	Angel		1,458
Internet Brands	eCommerce	El Segundo	Acq - Fin - II	4/30/2019	Series D	291	1,100
CORE Nutrition	Non-alcoholic beverages	El Segundo	Acquired	9/27/2018	Series C	39	525
Emmaus Life Sciences	Drug Development	Torrance	Corp Majority	1/23/2017	Debt	30	441
PeerStreet	eCommerce	El Segundo			Series B	30	147
Velocify	Internet Software & Services	El Segundo	Acquired	9/1/2017	Series B	15	128
Relativity Space	Aerospace & Defense	Inglewood			Series B	35	109
Nativo	Internet Software & Services	El Segundo			Series B - II	5	59
Phyn	Mobile Software & Services	Torrance	Corp Majority	5/25/2016	Corp Minority	12	40
Health-Ade Kombucha	Non-alcoholic beverages	Torrance			Series D	20	24

Source: CB Insights

"...with the rise of SpaceX, Hawthorne has seen remarkable job growth in recent years; higher than the South Bay and the whole of L.A. County."

"The most important driver of the South Bay's economy is the manufacturing sector, the crown jewel of which is the aerospace and defense industry."
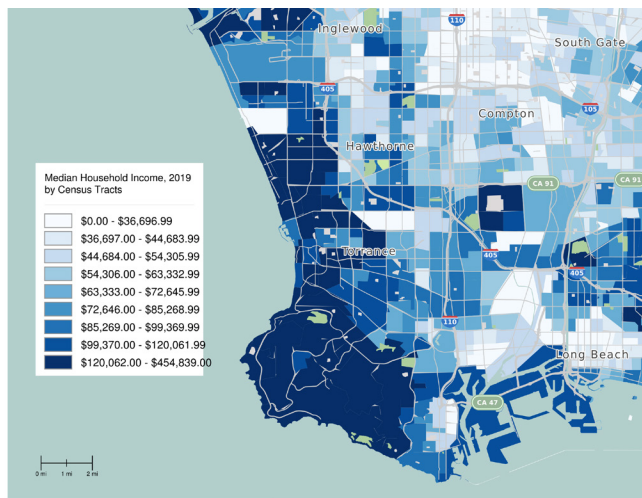
SOUTH BAY HOUSEHOLD INCOME AND DEMOGRAPHIC STATISTICS

In the previous section, we discussed the data by industry by workplace. Here we will analyze the statistics by residence. Figure 16 illustrates the median household income by Census tract in the South Bay in 2018. The darker the color, the higher the value. Manhattan Beach and Rancho Palos Verdes have the highest median household income in the region. By and large, the coastal South Bay has higher income and spending than the inland South Bay, with the exception of the neighborhood of CSU Dominguez Hills.

It is not surprising to see that household income is highly correlated with education level by zip codes. Figure 17 exhibits the percentage of adult residents with an educational attainment of college or higher. It looks similar to Figure 16. Income and education level are also highly correlated with housing values, as shown in Figure 18. Note that housing values are still relatively affordable in Hawthorne and Inglewood. With their convenient geographic locations, prosperous aerospace companies, and the upcoming new stadium and event space being built for the Rams and Chargers football teams in Inglewood, we expect these two cities to see transformative growth in the near future.

Figure 17   Percentage of Education for College or Higher by Census Tract in the South Bay, 2019

Source: U.S. Census through SimplyAnalytics

Figure 16   Median Household Income by Census Tract in the South Bay, 2019
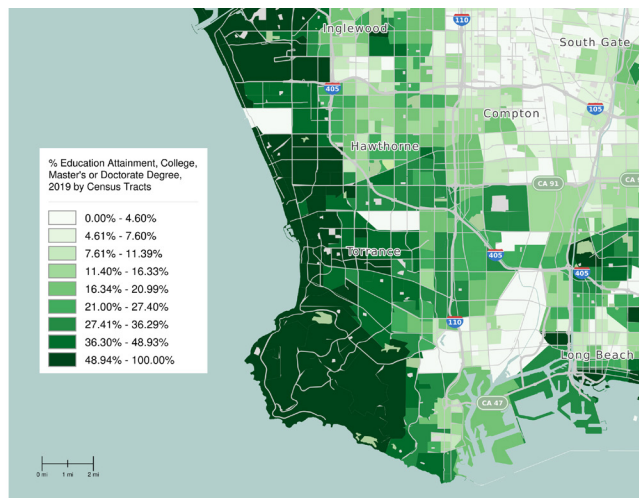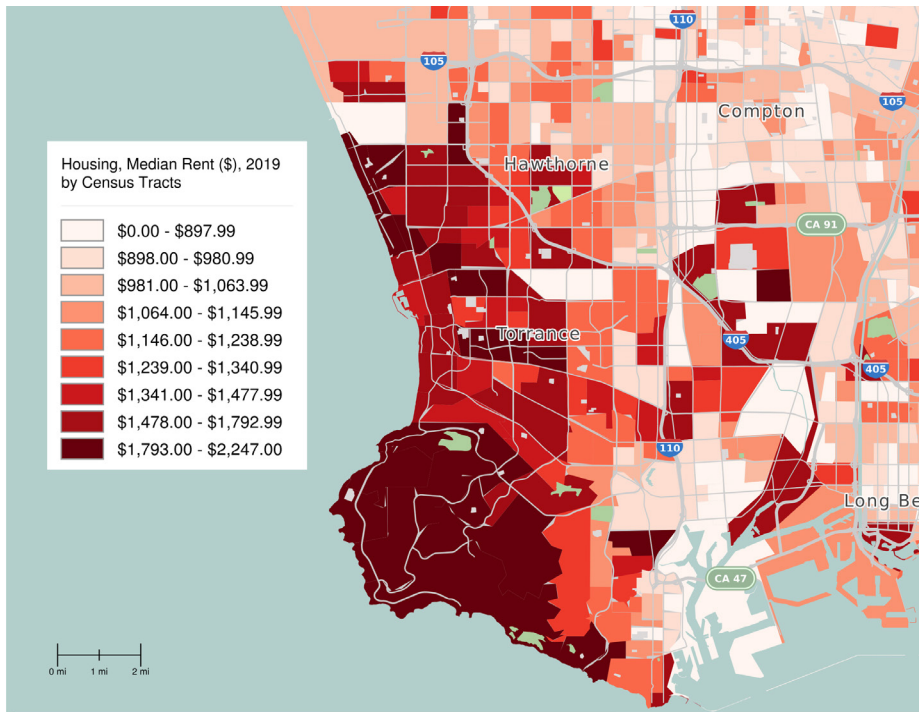

Source: U.S. Census through SimplyAnalytics

Figure 18   Median Housing Value by Census Tract in the South Bay, 2019
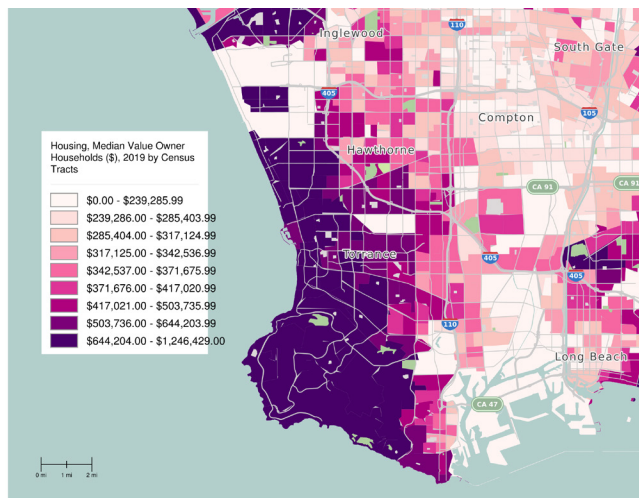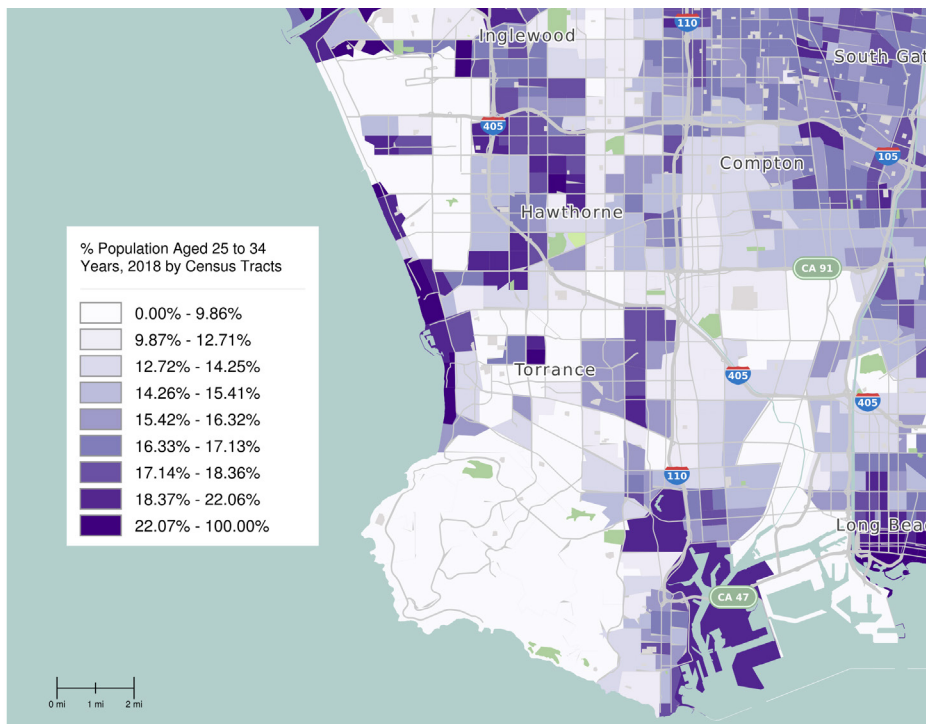

Source: U.S. Census through SimplyAnalytics

Figure 19   Median Rent by Census Tract in the South Bay, 2018

Source: U.S. Census through SimplyAnalytics

Figure 20   Percentage of Population of Age 25 to 34 by Census Tract in the South Bay, 2018

Source: U.S. Census through SimplyAnalytics

Figure 19 illuminates the median rent in the South Bay. Rising rents have made the South Bay less affordable. In September, California passed the bill, AB 1482, to restrict landlords from raising rents by 5% plus the California inflation rate in any year. The rent control bill might contain run away rental costs in the short run, though it is not clear that this control will be binding except in unusual years.

Figure 20 depicts the percentage of population aged 25 to 34, who might just be graduating from college or in the early stage of their careers and the future backbone of the workforce. Young adults tend to live in three clusters: (1) Hermosa and Redondo Beach, (2) Inglewood and Hawthorne, and (3) Torrance and the Harbor area.

SOUTH BAY ECONOMIC OUTLOOK

In the past several years, the South Bay economy followed closely the pace of the L.A. economy. From 2011 to 2018, its payroll employment grew steadily at a 2.2% annual rate on average. The most important driver of the South Bay's economy is the manufacturing sector, the crown jewel of which is the aerospace and defense industry. We predict that the South Bay's growth rate will remain stable over the next year, mostly due to the continued high level of the federal government's defense budget. The new NFL stadium and renaissance of professional football returning to L.A. will continue to propel the economy in the area.

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