

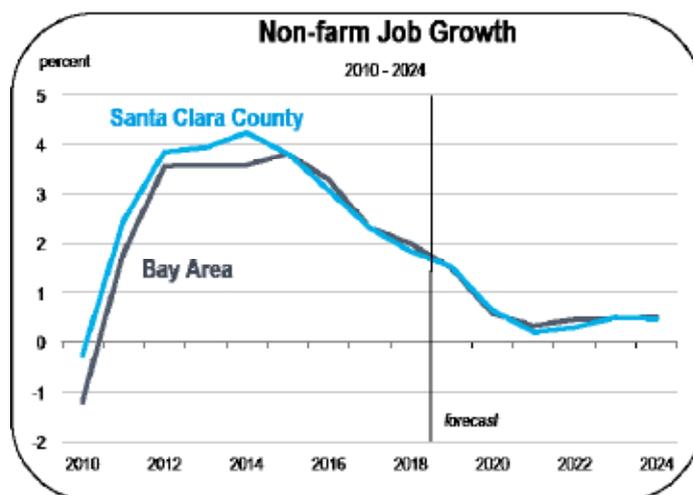
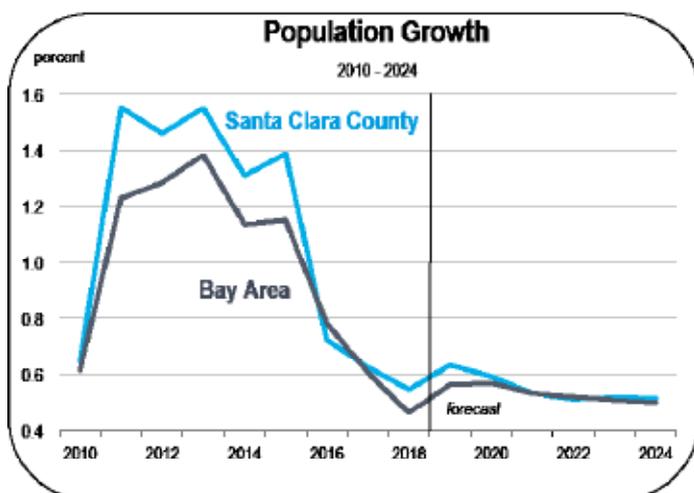
Santa Clara County Economic Forecast

Forecast Summary

- Approximately 16,600 non-farm jobs will be created in Santa Clara County during 2019. Over the following five years, an average of 4,600 new jobs are expected per year.
- Employment growth will be led by professional services, education and healthcare, and information. These sectors will account for 85 percent of net job creation through 2024.
- Job consolidations in the cyclical construction sector are expected.
- The unemployment rate averaged 2.6 percent in 2018, but may begin to deteriorate in 2019.
- The county population is expanding slower than the statewide population, and growth will remain slow.
- Housing production has increased in recent years, but is just barely keeping pace with population growth. Over the forecast period, most new homes will be multifamily units, often in large apartment complexes.

Job Growth

- Growth was relatively strong in 2018, but the economic expansion is old, and the expected slowdown in job creation is underway.
- Santa Clara County is vulnerable to net job loss in 2020 or 2021



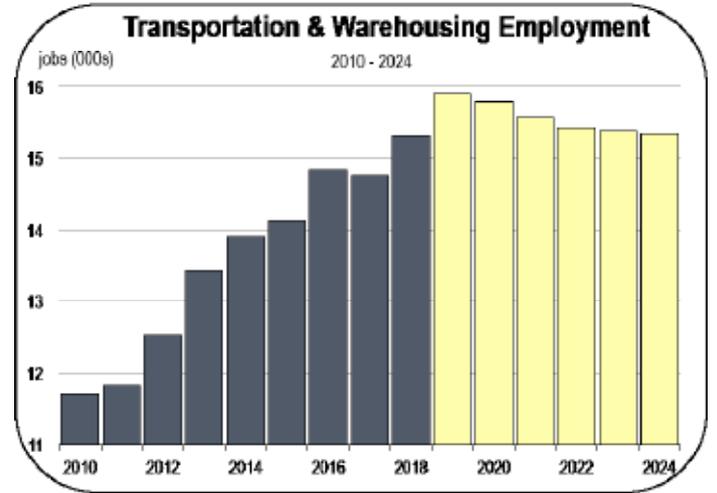
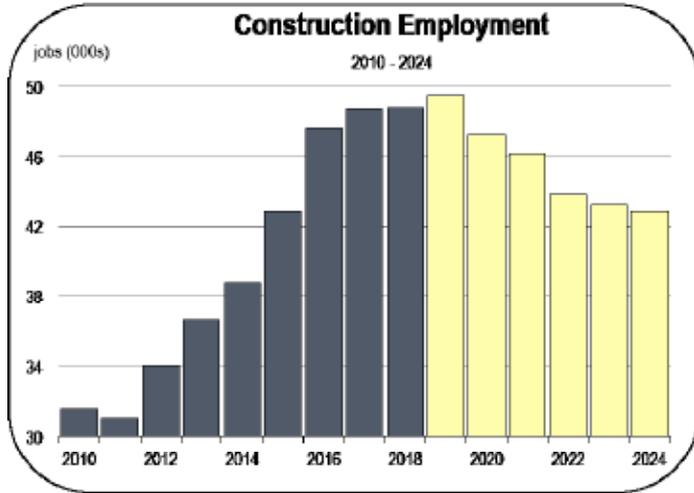
if the economy lapses into recession.

- In 2018, large gains were observed in manufacturing, healthcare, and information services.
- Declines were observed in retail trade and wholesale trade.
- Between 2012 and 2018, non-farm job growth averaged 3.2 percent per year.
- Between 2018 and 2024, job growth is forecast to average 0.6 percent annually.
- Approximately 16,600 non-farm jobs will be created during 2019.
- Through 2024, an average of 4,600 new non-farm wage and salary jobs are expected each year.

Construction Employment

- The County's construction boom is currently at its peak. The forecast indicates a modest consolidation of the sector over the next 5 years.
- More than 10,000 new homes broke ground in 2017, but housing starts fell to only 7,700 in 2018.
- Over the forecast period, fewer construction workers will be

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needed due to a notable decline in housing production.

Manufacturing Employment

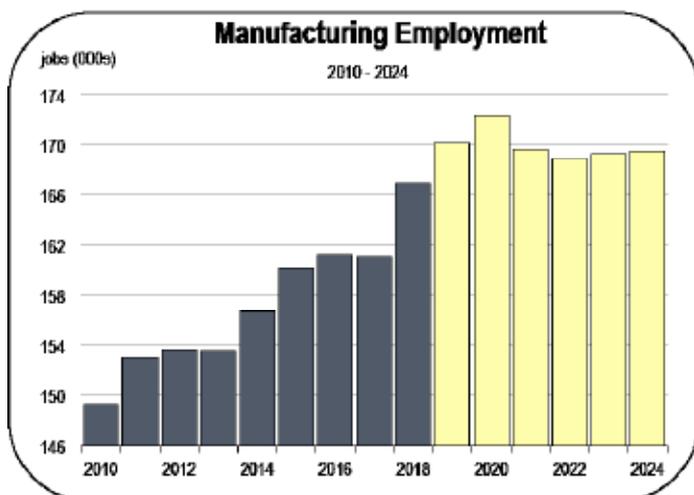
- The Santa Clara County manufacturing sector gained 5,700 jobs in 2018.
- Job gains in 2018 were most prominent in aerospace and pharmaceutical manufacturing, which hired several thousand new workers.
- Santa Clara County has a large presence in computer and electronic manufacturing, but this subsector gained very few jobs last year.
- Some computer and electronic firms had large layoffs, including:

- Cisco – 405 layoffs
- Qualcomm – 205 layoffs
- GlobalFoundries – 87 layoffs

- More than 700 manufacturing layoffs were reported in early 2019, including firms like Tesla, Oracle, and Broadcom.
- Jobs in manufacturing are expected to peak in 2020 or 2021 with growth either moderating or declining thereafter.

Transportation and Warehousing Employment

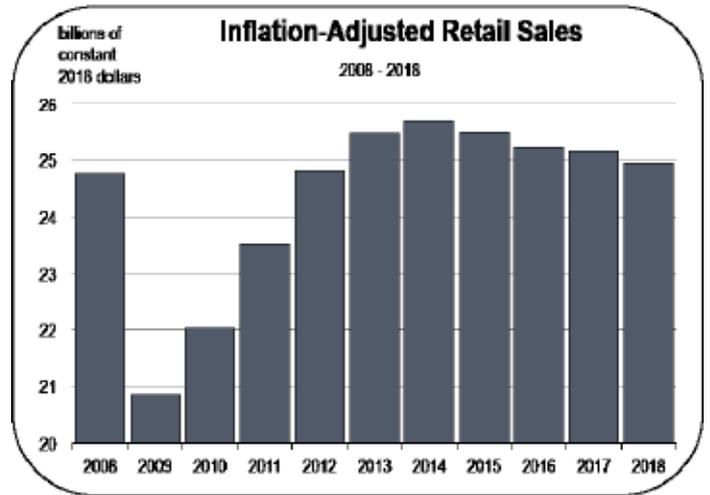
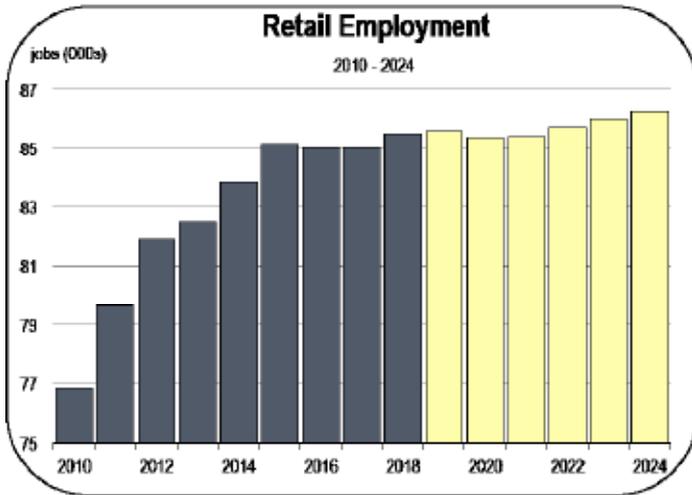
- This industry generated 500 new jobs in 2018, and will add 600 more in 2019.
- Job gains have been strongest in delivery companies like UPS and FedEx as more online shopping has caused a higher volume of goods to be shipped directly to consumers' homes.
- Jobs were also created at warehousing and logistics facilities, which manage, store, and process retail (including online retail) and wholesale orders.
- 200 jobs were also created at local warehousing and logistics centers, and 100 were generated at delivery firms like UPS and FedEx.



Retail Trade Employment

- Retail employment has been stagnant for several years, and retail sales have begun to decline.
- The industry is diverging into three distinct segments:

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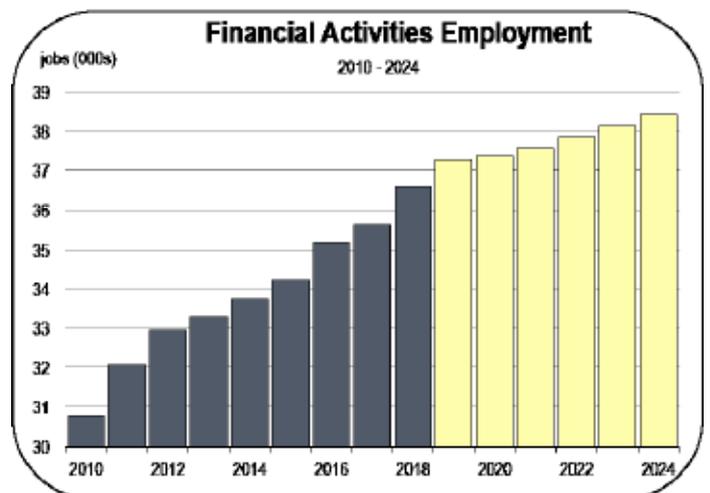


- Brick-and-mortar stores facing heavy online competition
- Brick-and-mortar stores not facing heavy online competition
- Online retailers themselves
- Job losses have accelerated at stores that face online competition:
 - Clothing stores
 - Department stores (i.e. Macy's)
 - Sporting goods stores
 - Furniture Stores
 - Consumer electronics stores
 - Book stores
 - Office supply stores
- Stores not facing online competition continue to create jobs:
 - Grocery stores
 - Gas stations
 - Car dealers
 - Drug stores and healthcare stores
- Some large stores closed in 2018, including:
 - Orchard Supply (San Jose and Mountain View)
 - Sears (San Jose)
 - Toys R Us (San Jose)
- More closures have been announced in 2019:
 - Lowes (San Jose)
 - Macy's (Sunnyvale)
- Very few jobs will be created over short-term forecast period.
- Though not a part of the base forecast, a recession would probably

result in further retail consolidation and a corresponding fallout of jobs.

Financial Activities Employment

- Employment in financial activities continued to grow in 2018 despite weakness in many other parts of the state.
- Demand has been strongest in the real estate sector where hundreds of property managers have been hired to staff the new office and apartment buildings in the region.
- Growth will be slower over the forecast period as the building cycle matures, and as local banks offer more online services and fewer banking customers visit their local branches.

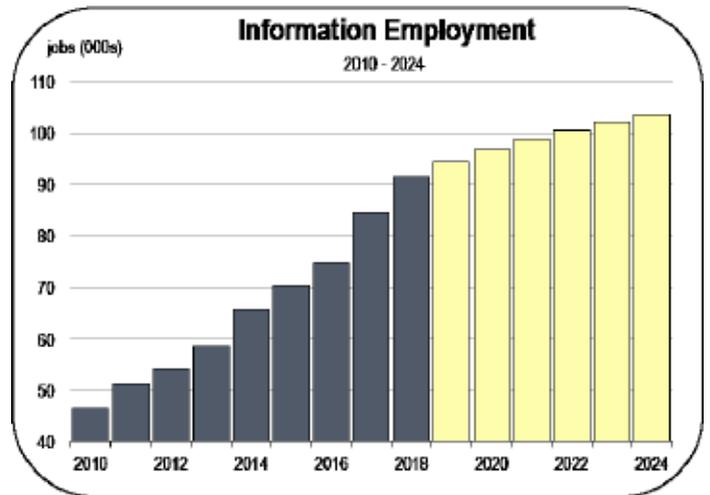
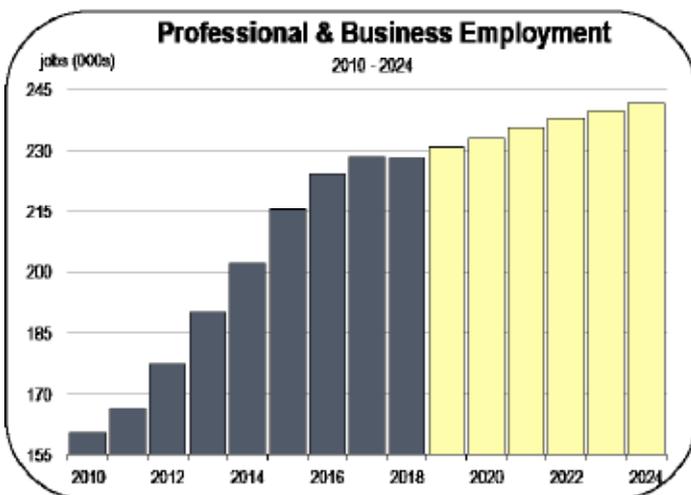


Santa Clara County Economic Forecast

Professional & Business Services Sub-Sectors 2018	Jobs in Subsector (000s)	Subsector's Share of Overall Industry
Custom IT Services	86.9	38.1%
Staffing Agencies	24.0	10.5%
Scientific Research	20.2	8.8%
Corporate Headquarters	20.2	8.8%
Engineering & Architecture	18.5	8.1%
Building Maintenance	12.4	5.4%
Other	10.8	4.7%
Accounting & Bookkeeping	10.3	4.5%
Corporate Security	8.8	3.9%
Law	8.3	3.6%
Business Consulting	4.5	2.0%
Marketing and Advertising	3.6	1.6%

Professional and Business Services Employment

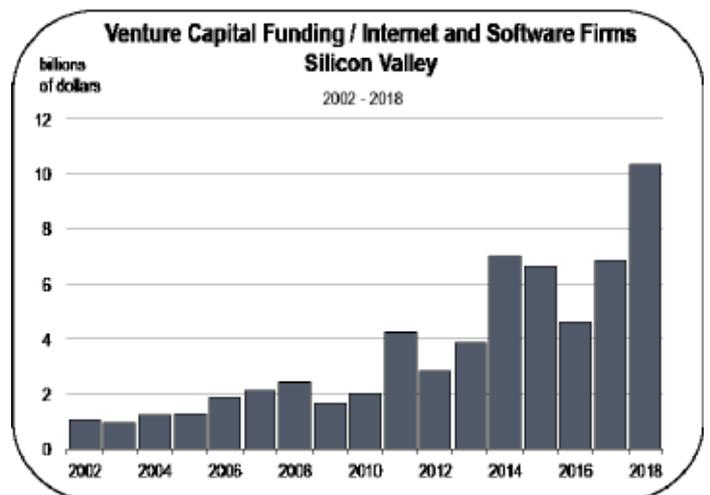
- The professional and business services sector is diverse. It has many of the county's tech jobs, as well as other high-value services like engineering and law.
- It also contains business support functions like staffing agencies, building maintenance services, and security services.
- About 9 percent is comprised of the corporate and regional headquarters of large companies.
- These industry sizes are unique to Santa Clara County. Other counties have a much higher share of jobs at business support and corporate security firms and fewer tech jobs.



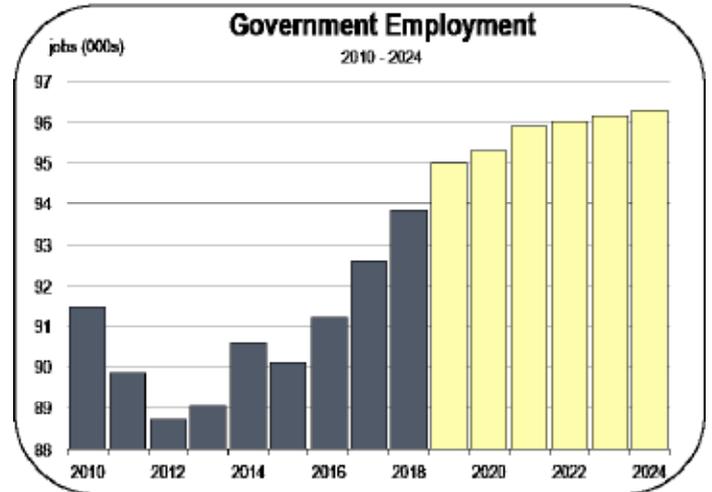
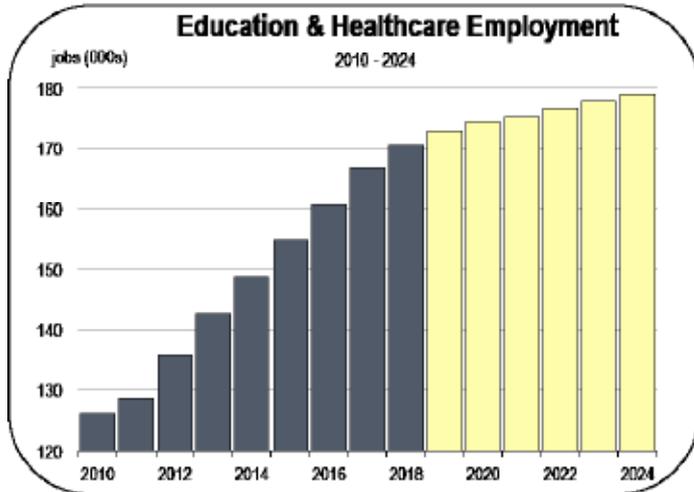
- Employment in this industry was relatively unchanged in 2018.
 - Custom IT services continued to grow quickly – 4,800 jobs created in 2018
 - Business consulting firms contracted – 500 jobs lost
 - Back office support companies laid off many workers – 3,000 jobs lost

Information Employment

- The information sector contains most of the county's software (except custom programming), web hosting, and data services firms, and it created 7,000 jobs last year. In part, rapid job creation has been the result of high levels of venture capital funding for internet and software firms.
- The county now has:
 - 7,800 workers in web hosting and cloud storage.
 - 23,800 workers in software firms.
 - 49,100 workers in internet publishing and search companies (including Google and Yahoo).



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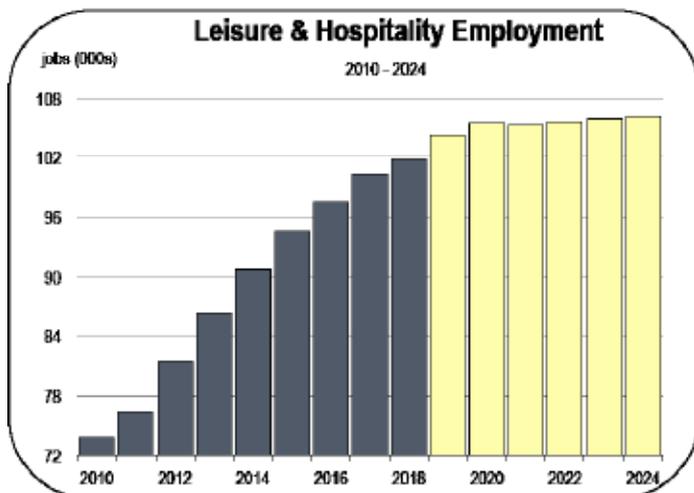
Private Education and Healthcare Employment

- As one of the most affluent regions in the state, Santa Clara County has a high level of employment in private education.
- In 2018, private schools created more than 700 new jobs, primarily at private colleges and universities.
- The healthcare industry created more than 3,000 jobs.
- Growth was observed across most segments of healthcare, including doctors’ offices, outpatient care centers, and organizations that serve the elderly and people with disabilities.

- Job growth will remain strong in 2019. However, the future of the U.S. health insurance landscape is unknown, and legislative changes could influence employment levels in health services during the forecast period.

Leisure and Hospitality Employment

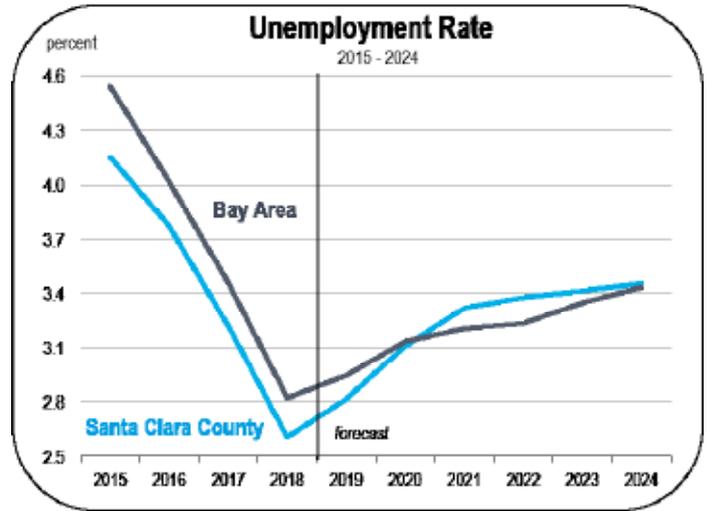
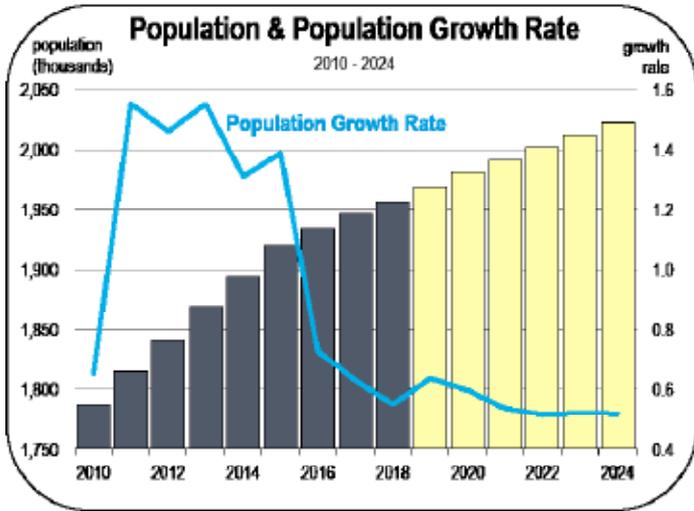
- After years of rapid growth, the restaurant sector gained only 300 jobs last year. Only 30 new restaurants opened, compared to 70 or 80 in each of the last few years.
- 400 jobs were also created at gyms and fitness centers, and 300 were generated at hotels.
- This sector will expand by more than 3,500 jobs through 2020.



Government Employment

- Government agencies added 1,200 jobs in 2018.
- 200 jobs were created at public schools, and another 1,000 were added to municipal agencies.
- San Jose State and the local community colleges expanded by 200 workers.
- Federal government offices located within Santa Clara County contracted by 300 jobs.
- Future employment trends will be influenced by population growth and public budgetary conditions.

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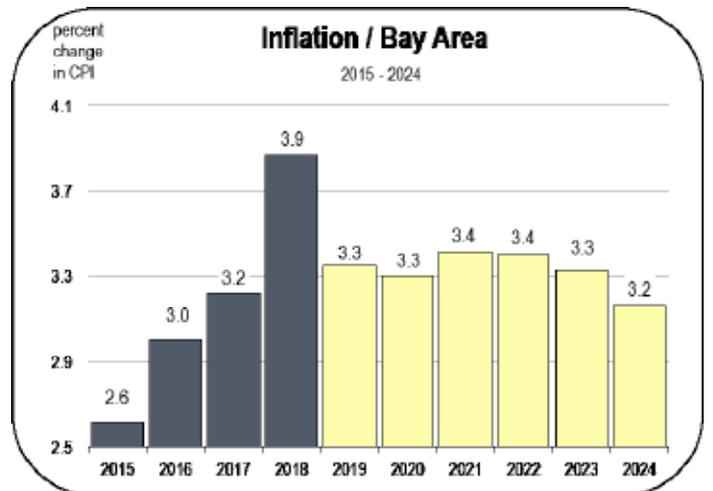
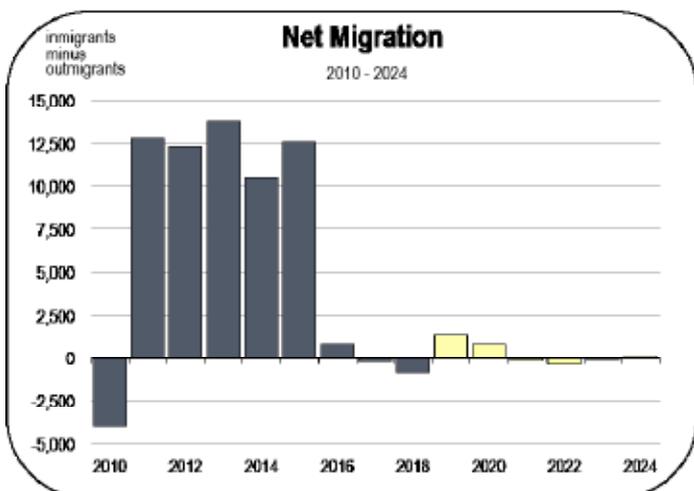


Population Growth

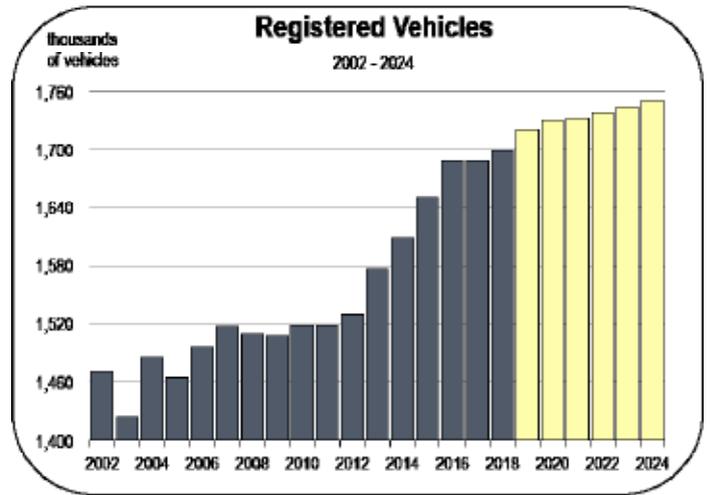
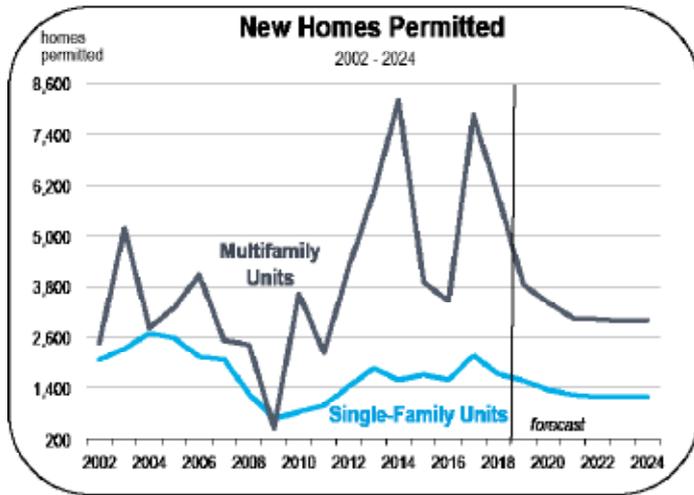
- Population growth has decelerated and is now below the statewide average.
- High home prices and rents have dramatically reduced the flow of new residents into the County. Estimated net migration was negative in 2017 and 2018.
- Over the short term forecast period, population growth through in-migration is expected to be negligible.
- Nevertheless, population growth will average 0.6 percent per year, and the county will eclipse 2 million residents during the forecast period.

Unemployment and Inflation Rates

- The unemployment rate in Santa Clara County averaged 2.6 percent in 2018, which was lower than the composite rate for the Bay Area.
- Beginning in 2019, the unemployment rate may deteriorate, but with an unemployment rate of just 2.8 percent, the job market will still be exceptionally tight and worker recruitment will remain problematic.
- Inflation accelerated in 2018 as energy prices increased and housing costs rose rapidly. Inflation will remain elevated in 2019 and 2020 and will likely be above 3 percent.



Santa Clara County Economic Forecast



New Housing Production

- Housing production has not kept pace with population growth, which has led to affordability issues. The typical household now spends more than half of its income on housing costs.
- There are a number of development projects that will add homes to the market between 2019 and 2024. However, the building cycle has already peaked, and overall housing production will decelerate.
- The most prominent project is a collaboration between Google and the Sobrato Organization, which would bring 10,000 new homes within close proximity to the offices of Google and Microsoft, but construction activity is still years away.
- The entire Santa Clara County pipeline contains more than 62,000 housing units, primarily in San Jose, Mountain View, and Santa Clara.
- From 2019 to 2024, an average of 4,500 units will be started per year, mostly in multifamily structures.

Income per Capita

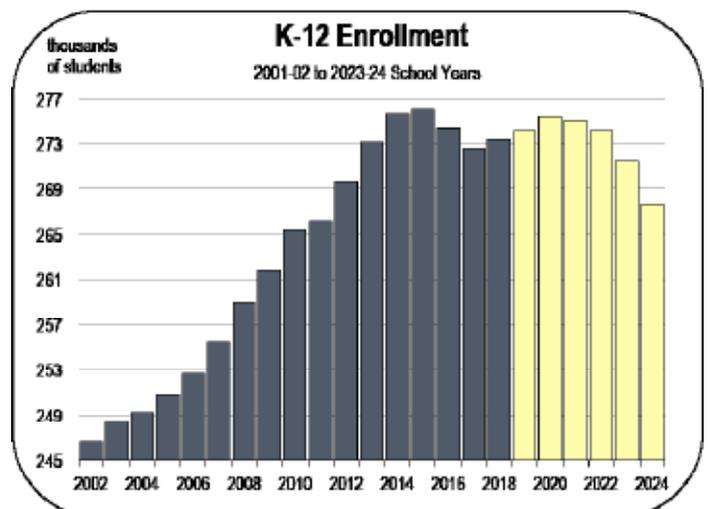
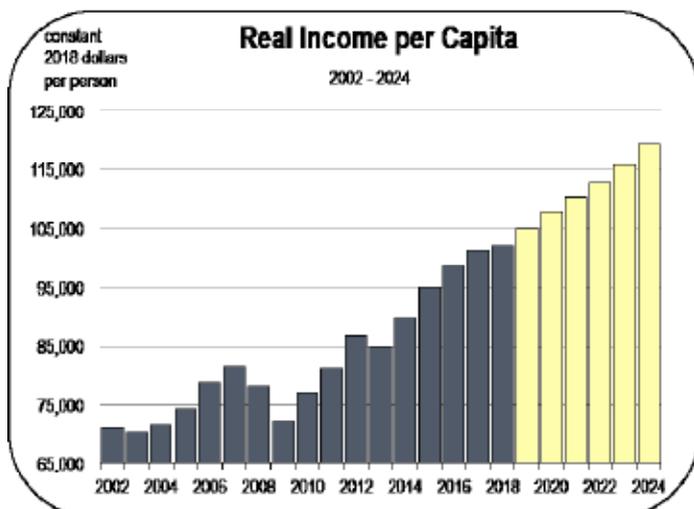
- Income per capita in 2018 was \$102,100, placing Santa Clara County among the wealthiest regions of California. Real income per capita has risen rapidly in the county, growing by an average inflation-adjusted rate of 2.8 percent per year over the last 6 years. Real income per capita is expected to grow by 2.6 percent per year through 2024.

Registered Vehicles

- There were 1.70 million registered vehicles in the county in 2018. By 2024, it is expected that the county will have approximately 1.75 million registered vehicles.

Public School Enrollment

- There were 273,400 K-12 students in the 2017–2018 school year. By 2024, there are expected to be 267,600 students. Enrollment will decline because the population aged 5 to 17 will decline.



Santa Clara County Economic Forecast

Economic Indicators

2015-2018 History, 2019-2050 Forecast

	Population (people)	House- holds (thousands)	Average Household Income (dollars)	New Homes Permitted (homes)	Registered Vehicles (thousands)	Personal Income (billions)	Taxable Retail Sales (billions)	Local Sales Tax (millions)	Real Industrial Production (billions)	Real per Capita Income (dollars)	School Enrollment (thousands)	Births (people)	Deaths (people)
2015	1,919,845	627.0	\$267,690	5,616	1,651	\$167.8	\$23.5	\$586	\$45.7	\$95,098	276.1	23,393	10,061
2016	1,933,775	632.9	\$282,515	5,036	1,687	\$178.8	\$23.7	\$591	\$47.6	\$98,703	274.3	23,042	10,120
2017	1,945,911	636.7	\$298,428	10,006	1,688	\$190.0	\$24.2	\$606	\$49.2	\$101,417	272.6	22,133	10,367
2018	1,956,579	642.2	\$310,953	7,668	1,699	\$199.7	\$24.9	\$624	\$50.8	\$102,056	273.4	21,661	10,536
2019	1,968,987	649.1	\$327,073	5,412	1,721	\$212.3	\$25.6	\$640	\$52.9	\$104,946	274.2	21,644	10,623
2020	1,980,691	654.0	\$344,512	4,767	1,730	\$225.3	\$26.0	\$651	\$55.0	\$107,804	275.3	21,610	10,725
2021	1,991,288	658.2	\$361,998	4,271	1,733	\$238.3	\$26.7	\$667	\$55.6	\$110,303	275.1	21,640	10,885
2022	2,001,515	662.0	\$380,584	4,197	1,737	\$251.9	\$27.5	\$688	\$56.8	\$112,887	274.2	21,700	11,108
2023	2,011,910	665.7	\$401,064	4,156	1,744	\$267.0	\$28.4	\$709	\$58.5	\$115,866	271.5	21,781	11,330
2024	2,022,309	669.5	\$423,275	4,177	1,751	\$283.4	\$29.1	\$728	\$60.4	\$119,291	267.6	21,873	11,549
2025	2,032,677	673.2	\$444,457	4,212	1,758	\$299.2	\$29.9	\$747	\$62.4	\$122,350	262.6	21,937	11,782
2026	2,042,815	677.0	\$463,833	4,170	1,764	\$314.0	\$30.6	\$764	\$64.1	\$124,815	257.7	22,028	12,006
2027	2,052,672	680.7	\$484,028	4,178	1,770	\$329.5	\$31.3	\$782	\$66.0	\$127,449	253.8	22,079	12,240
2028	2,062,393	684.5	\$506,242	4,226	1,777	\$346.5	\$32.1	\$802	\$67.9	\$130,388	250.5	22,129	12,488
2029	2,071,881	688.2	\$524,699	4,203	1,783	\$361.1	\$32.9	\$821	\$69.2	\$132,096	247.3	22,206	12,744
2030	2,081,155	692.0	\$542,310	4,148	1,789	\$375.3	\$33.6	\$841	\$70.3	\$133,590	245.1	22,298	13,020
2031	2,090,247	695.7	\$559,292	4,090	1,793	\$389.1	\$34.4	\$860	\$71.3	\$134,935	242.4	22,467	13,290
2032	2,099,344	699.4	\$574,347	4,049	1,798	\$401.7	\$35.3	\$881	\$71.9	\$135,442	240.9	22,676	13,561
2033	2,108,474	703.0	\$593,107	4,009	1,804	\$416.9	\$36.0	\$900	\$73.2	\$137,229	239.6	22,902	13,832
2034	2,117,634	706.6	\$612,686	3,968	1,809	\$432.9	\$36.8	\$921	\$74.3	\$138,812	239.2	23,116	14,096
2035	2,126,714	710.1	\$633,282	3,859	1,814	\$449.7	\$37.7	\$943	\$75.5	\$140,352	239.4	23,300	14,377
2036	2,135,731	713.6	\$653,106	3,745	1,818	\$466.0	\$38.8	\$969	\$76.2	\$141,037	241.5	23,471	14,638
2037	2,144,691	716.9	\$673,958	3,627	1,823	\$483.2	\$39.9	\$997	\$76.9	\$141,653	245.2	23,628	14,882
2038	2,153,614	720.2	\$696,676	3,538	1,828	\$501.7	\$41.0	\$1,024	\$77.8	\$142,777	249.1	23,771	15,119
2039	2,162,510	723.4	\$719,716	3,466	1,833	\$520.6	\$42.2	\$1,054	\$78.6	\$143,531	253.2	23,907	15,347
2040	2,171,405	726.5	\$742,911	3,407	1,838	\$539.7	\$43.3	\$1,083	\$79.3	\$144,293	257.5	24,042	15,559
2041	2,180,341	729.5	\$766,958	3,358	1,843	\$559.5	\$44.5	\$1,112	\$80.2	\$145,350	262.2	24,173	15,730
2042	2,189,332	732.5	\$791,048	3,315	1,848	\$579.5	\$45.6	\$1,140	\$81.1	\$146,404	266.9	24,301	15,892
2043	2,198,330	735.5	\$815,551	3,270	1,853	\$599.9	\$46.7	\$1,167	\$82.1	\$147,537	271.8	24,428	16,053
2044	2,207,366	738.5	\$840,433	3,230	1,859	\$620.6	\$47.7	\$1,193	\$83.2	\$148,889	277.1	24,549	16,224
2045	2,216,376	741.4	\$864,429	3,187	1,864	\$640.9	\$48.9	\$1,222	\$84.0	\$149,673	281.7	24,653	16,420
2046	2,225,369	744.2	\$888,324	3,145	1,870	\$661.1	\$50.0	\$1,250	\$84.8	\$150,466	285.7	24,733	16,584
2047	2,234,408	747.1	\$911,660	3,109	1,875	\$681.1	\$51.1	\$1,279	\$85.4	\$151,054	289.4	24,829	16,714
2048	2,243,436	749.9	\$936,069	3,066	1,881	\$701.9	\$52.3	\$1,308	\$86.2	\$151,712	293.0	24,899	16,827
2049	2,252,507	752.6	\$961,293	3,029	1,886	\$723.5	\$53.5	\$1,338	\$86.9	\$152,389	296.2	24,958	16,930
2050	2,261,595	755.4	\$986,916	2,992	1,892	\$745.5	\$54.8	\$1,369	\$87.6	\$153,015	298.6	25,016	17,042

Employment Sectors

2015-2018 History, 2019-2050 Forecast

	Total Wage and Salary	Farm	Construction	Manufac- turing	Transportation and Utilities	Wholesale and Retail Trade (thousands of jobs)	Financial Activities	Professional Services	Information	Health and Education	Leisure	Government
2015	1,029	3.7	42.9	160.2	14.1	121.9	34.2	215.2	70.4	154.9	94.5	90.1
2016	1,061	3.9	47.6	161.3	14.8	122.4	35.2	224.1	74.5	160.6	97.6	91.2
2017	1,085	3.8	48.7	161.2	14.8	120.0	35.6	228.3	84.4	166.9	100.3	92.6
2018	1,105	3.8	48.8	166.9	15.3	119.2	36.6	228.2	91.4	170.7	101.8	93.8
2019	1,121	3.8	49.5	170.2	15.9	119.3	37.3	230.8	94.3	173.0	104.3	95.0
2020	1,128	3.8	47.3	172.3	15.8	119.0	37.4	233.1	96.8	174.3	105.4	95.3
2021	1,131	3.8	46.2	169.7	15.6	119.0	37.6	235.5	98.8	175.3	105.3	95.9
2022	1,134	3.8	43.9	168.9	15.4	119.4	37.8	237.7	100.6	176.6	105.6	96.0
2023	1,139	3.8	43.2	169.3	15.4	119.8	38.1	239.7	102.1	177.8	105.8	96.1
2024	1,145	3.8	42.9	169.5	15.3	120.1	38.4	241.5	103.4	179.1	106.1	96.3
2025	1,151	3.8	42.5	170.7	15.3	120.4	38.7	243.2	104.5	180.3	106.4	96.4
2026	1,156	3.8	41.5	172.0	15.2	120.6	39.0	244.8	105.5	181.5	106.7	96.5
2027	1,160	3.9	40.4	173.1	15.1	120.9	39.3	246.2	106.3	182.6	107.1	96.6
2028	1,165	3.9	40.5	174.1	15.0	121.4	39.7	247.6	107.1	183.4	107.4	96.6
2029	1,170	3.9	40.4	175.0	15.0	121.7	39.9	249.0	107.7	184.4	107.8	96.7
2030	1,175	3.9	40.4	175.5	14.9	121.9	40.2	250.2	108.3	185.3	108.2	96.8
2031	1,178	3.9	39.7	176.0	14.9	122.1	40.5	251.5	108.9	186.3	108.6	96.9
2032	1,182	3.9	39.4	176.4	14.9	122.3	40.8	252.7	109.3	187.3	109.0	97.0
2033	1,186	3.9	39.2	176.9	14.9	122.6	41.0	253.9	109.8	188.3	109.4	97.2
2034	1,190	3.9	39.0	177.4	14.8	122.8	41.3	255.1	110.2	189.3	109.8	97.3
2035	1,194	3.9	38.6	177.9	14.8	123.0	41.5	256.2	110.6	190.4	110.1	97.4
2036	1,198	3.9	38.2	178.4	14.8	123.2	41.7	257.4	111.0	191.5	110.5	97.5
2037	1,201	3.9	37.9	178.8	14.8	123.4	41.9	258.5	111.3	192.7	110.9	97.6
2038	1,205	3.9	37.5	179.3	14.8	123.6	42.2	259.7	111.7	193.8	111.3	97.7
2039	1,209	3.9	37.3	179.8	14.8	123.8	42.4	260.8	112.0	195.0	111.7	97.7
2040	1,213	3.9	37.0	180.3	14.8	124.0	42.6	261.9	112.3	196.2	112.1	97.9
2041	1,217	3.9	36.9	180.7	14.8	124.3	42.9	263.1	112.6	197.4	112.4	98.0
2042	1,221	3.9	36.8	181.2	14.8	124.5	43.2	264.2	112.9	198.6	112.8	98.2
2043	1,225	3.9	36.6	181.7	14.8	124.7	43.4	265.4	113.2	199.8	113.2	98.4
2044	1,229	3.9	36.5	182.2	14.8	124.9	43.6	266.5	113.5	201.1	113.6	98.6
2045	1,234	3.9	36.5	182.6	14.8	125.1	43.9	267.7	113.8	202.4	113.9	98.8
2046	1,238	3.9	36.4	183.1	14.8	125.3	44.1	268.8	114.1	203.6	114.3	99.0
2047	1,242	3.9	36.3	183.6	14.8	125.4	44.4	270.0	114.4	204.9	114.7	99.3
2048	1,246	3.9	36.1	184.0	14.9	125.6	44.7	271.1	114.7	206.2	115.0	99.5
2049	1,251	3.9	36.2	184.5	14.9	125.8	44.9	272.3	115.0	207.5	115.4	99.8
2050	1,255	3.9	36.2	185.0	14.9	126.0	45.2	273.5	115.3	208.8	115.8	100.0

Santa Clara County Economic Forecast

Socioeconomic Indicators

