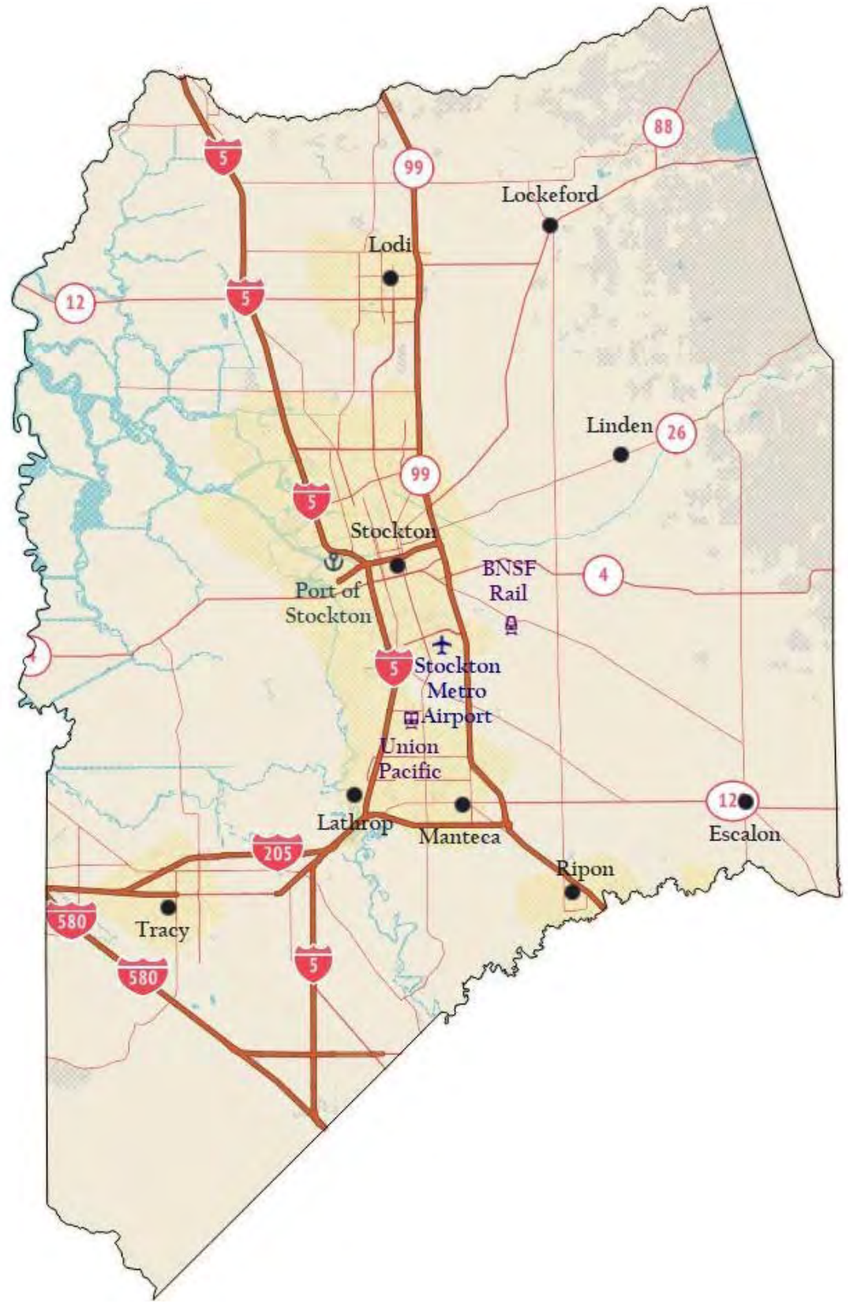
SJC Index

San Joaquin County

2020

Analysis of San Joaquin County Economic & Social Indicators

Eberhardt School of Business
Center for Business & Policy Research



Forward

This report is being released in fall 2020, a year defined by extreme social and economic change due to the global COVID-19 pandemic. At this time, very few of the indicators highlighted in this report have any local, San Joaquin County, data available for 2020, and what is available covers only the very initial stages of the pandemic. As a result, we have decided to only present data indicators in this report through the end of 2019. In this sense, we believe it provides a useful snapshot of the current state and progress of San Joaquin County just prior to the onset of the COVID-19 pandemic. As we review these indicators in the future, some social, economic, and demographic characteristics of the county described in these pages will return to pre-pandemic trends while others may be fundamentally changed.

Thus, this edition of the San Joaquin County Index can serve as a useful benchmark for measuring the effects of COVID-19, and a picture of the County's comparative profile without the confounding effects of COVID-19 that have made many traditional data indicators difficult to interpret. By reviewing data indicators for San Joaquin County and its communities in comparison to the other counties, regions, the state and the nation, the Index fosters a shared understanding about opportunities and challenges. Thus, the Index provides a foundation of reliable information to support actions to advance economic and community development.

This San Joaquin County Index is part of a series of projects that the Center from Business and Policy Research (CBPR) at the University of the Pacific has undertaken over the years to advance awareness of local, regional and inter-regional change. These include a series of North San Joaquin Valley (NSJV) regional assessment projects, collaboration with partner organizations in analyses of the Northern California Megaregion, and compilation of cost of living data as part of the national Cost of Living Index (COLI) that is reported by the Council for Community and Economic Research. In addition, CBPR has a broad portfolio of work on other specific issues that may be of interest to readers of the San Joaquin County Index. These include studies on important issues such as workforce development, water, transportation, and housing. We invite you to visit the CBPR website to learn more, pacificcbpr.org and reach out to us directly with questions or interest in engaging CBPR for additional studies.

Finally, CBPR acknowledges the support of the San Joaquin Council of Governments (SJCOG) in the production of this Index. Particularly amidst all the challenges and changes 2020 has brought, the patient support and on-going partnership with SJCOG has been incredibly valuable and appreciated. Of course, any opinions expressed in this report are those of the authors' alone and do not necessarily reflect the views of the San Joaquin Council of Governments.

Key Findings

San Joaquin County Index

This Index presents estimates and data on San Joaquin County and sub-county geographies in comparisons to other counties, regions, the state as a whole and the nation. The research is presented across three major categories; The Economy, People & Society, and As a Place. The key findings are present below:

Economy

- 2019 marked the eight consecutive year of payroll job growth in the county.
- San Joaquin county's unemployment rate has dropped from nearly 17% in 2010 to less than six percent in 2019.
- Employment growth has been dominated by an expansion in the transportation and warehousing sector where employment grew by 22,500 between 2009 and 2019.
- Sub-county data lags that of the county as a whole, with employment from 2012 to 2017 strongest in the south of the county. The Tracy county subdivision growing by 10%, Manteca by 5.7% and Ripon by 5.6%.
- Since 2013, the county's poverty rate has declined in four of the five subsequent years.
- Real GDP growth in 2018 was 4.4% , with a current dollar value of $32.3 billion. In real terms, between 2011 and 2018 the county's GDP increased by 27% as several years of expansion followed the Great Recession.
- The real value of agriculture production in the county rose 2.7% in 2019. This was the third consecutive year of real growth in agriculture products, but it was still down 12% from inflation adjusted peak recorded in 2014.
- Real net income from agriculture exceeded $1.1 billion in 2014 but by 2018 it had declined to $263 million.
- Business churn is an indicator of entrepreneurial activity and while it has slowed in the county between 2008 and 2018 that decline has been driven by fewer business exits. In this the county has followed a statewide trend with the percentage of establishments exiting annually in the county declining from 10.5% in 2008 to 7.5% in 2018.

People and Society

- County population growth continues to outpace the state as a whole, but growth rates over the 2010s remain on track to be among the lowest ever.
- The fastest population growth in the County was in the southwestern portions where rates exceeded 10% in most communities during the period from 2010 to 2019.
- The county's population is forecast to exceed 1,000,0000 in 2047.

- County birthrates continue to decline, with the 12.8 births per 1,000 people in the county in 2018 representing a 27% decline from 2007 levels.
- The average age of mothers at the time of their child's birth has been rising from 27 years in 2009 to just under 29 years in 2018.
- County high school graduation rates have risen steadily, from about 71% in 2010 to nearly 84% in 2019.
- Educational attainment of the population has risen with 20% of the adult population having a bachelor's degree or higher in 2019 compared to 17.7% in 2010.
- Per capita felony arrest rates have declined from over 1,600 per 100,000 residents in 2009 to less than 1,000 per 100,000 residents in 2019.

As a Place

- Housing prices have been rising since 2012 but remain lower than pre-recession values.
- Multi-unit housing permits have been exceeding pre-recession levels, but single-unit permits remain relatively low and after growth from 2012 to 2018 declined in 2019.
- San Joaquin County resident travelled 219 more annual vehicle miles per capita in 2018 than other California residents, but this is down from the 521 more miles they drove in 2012.
- Annual ridership on the Altamont Corridor Express (ACE) commuter rail service between Stockton and Santa Clara has more than doubled from 676,000 in 2010 to 1,506,000 in 2019.
- In 2018, nearly 60,000 county residents travel regularly to the Bay Area for work
- While the Affordable Care Act significantly increased health insurance coverage in the county, state and country compared to levels in the early 2010s, those levels all saw large declines in 2019.
- The Average life expectancy in the county is 78.5 years
- County residents have higher mortality rates in nearly all categories compared to the rest of the state.

List of Figures and Tables

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Employment

Why Is This Important?

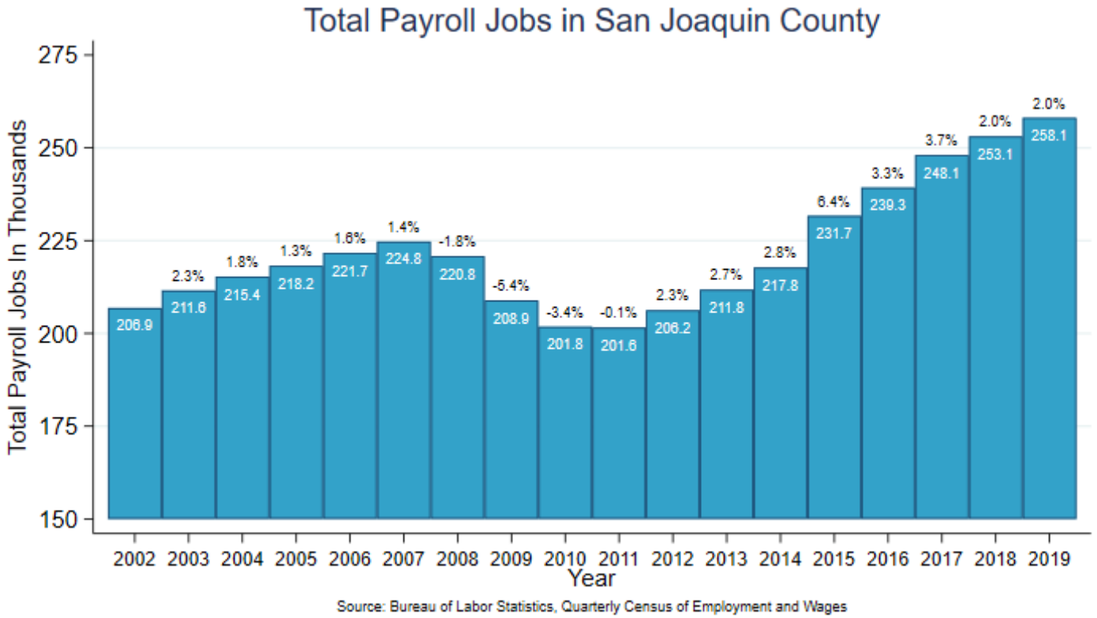
Employment is a critical measure of an economy's health because earnings from work is the primary source of income for most households. Jobs data are also among the first economic data that is reported, especially at the local level, and thus are an important measure of current trends in economic direction. The levels of employment by industry are an important indicator of the structure of a local economy and trends affecting specific sectors.

How Are We Performing?

The data reported below comes from the Bureau of Labor Statistics, Quarterly Census of Employment and Wages, that measures the number of payroll jobs from employer tax filings. The employment data is annual, which brings the timeseries up to the on set of the COVID-19 pandemic. The graph below shows the total number of employed individuals increased by 5,000 in 2019 for the second successive 2% increase. While this is a slower rate of growth than others since recovery from the Great Recession it is higher than the growth most years in the early 2000s.

A major feature of employment dynamics in the county has been the growth of the transportation and warehousing. This is clear in both the figures to the right. Between 2018 and 2019 the trade, transportation and utilities sector grew by 3.7% which was the fastest rate of any sector in the county and also the largest number. Government employment growth was also significant in the period, rising by 3.2%. While agriculture remains an important part of the county's economy, it experienced the largest employment decline between 2018 and 2019 at 5.1%.

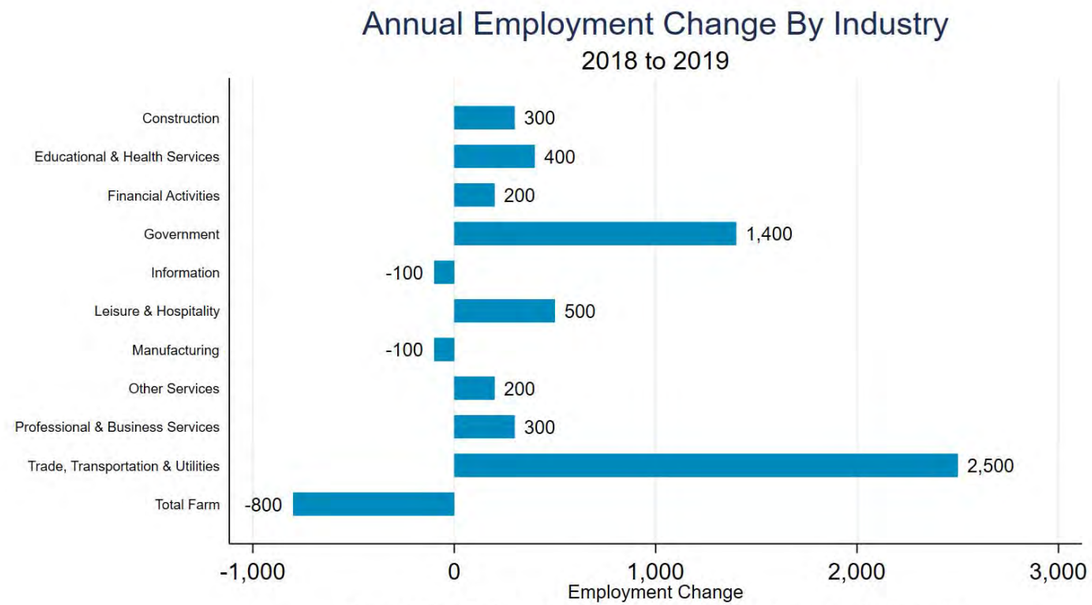
When looked at over the past decade, the substantial growth in the trade, transportation and utilities sector is again readily apparent. Construction sector employment has also been significant, growing by 56% between 2009 and 2019 after been hard hit during the Great Recession. The leisure and hospitality sector has also grown significantly with a 35% increase in employment during the period. The health sector has also seen substantial growth, increasing by 17% in the past decade. Agriculture, information and financial activities are all down on their employment from a decade ago.



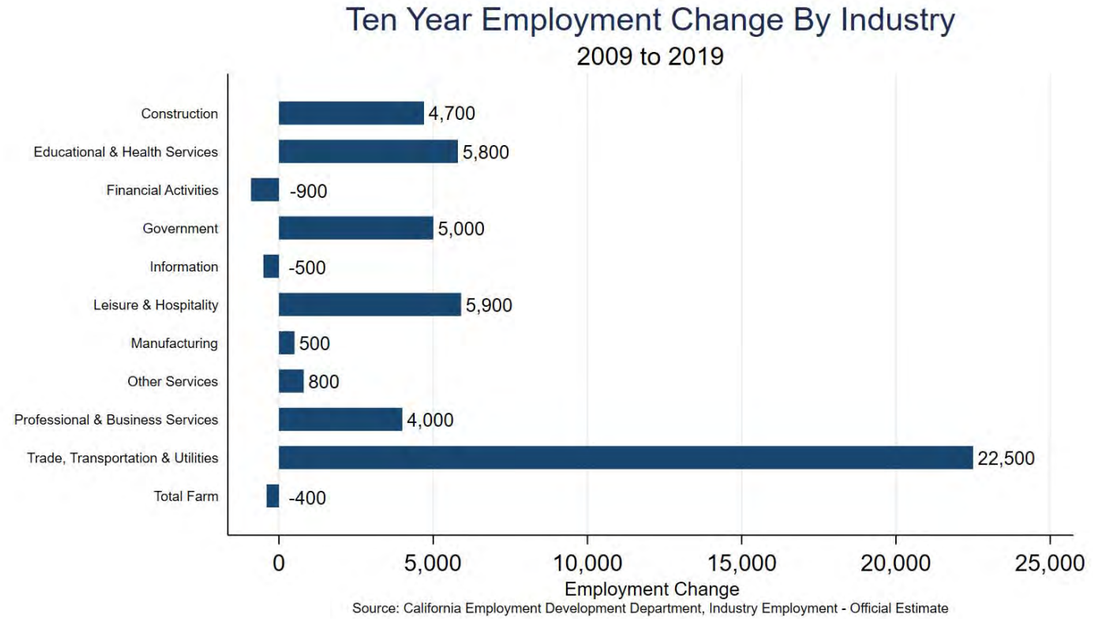
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Economy

Employment



Source: California Employment Development Department, Industry Employment - Official Estimates



Source: California Employment Development Department, Industry Employment - Official Estimate

Employment

Annual employment growth rates for San Joaquin County, California and the United States are presented in the graphs on top of the page to the right. These show that since 2012 the county has had comparatively strong employment growth. The marked increase in employment in 2015 was driven by major transportation and warehousing employers in the county like Amazon beginning operations. This growth has slowed in recent years and the county's employment growth rates have returned to levels similar to the state and nation as a whole.

Trends in unemployment over the past decade are shown in the figure on the bottom left of the opposite page. In 2010, the County's unemployment rate peaked at around 17% during the Great Recession at which point it was just over 5.2% higher than the statewide rate. Since then the unemployment rate has declined steadily to reach 5.7% in 2019. As a result of the strong employment growth, gap between the county and state unemployment rates has steadily declined every year since 2010 and in 2019 the county rate was just two percent higher than the state.

Trends in the number of people employed and the labor force in the county are reported in the figure on the bottom right of the of the opposite page. It shows that after growing rapidly from the mid-1990s into the recession, the number of County residents actively participating in the labor force stagnated between 2012 and 2014. However, between 2015 and 2018 the county returned to modest labor force growth but in 2019 it again declined slightly. Given that the county's population has steadily grown during this period its labor force participation rate has been relatively sluggish.

The composition of employment by industry in 2019 is shown in the table below. Accordingly, 82% of jobs were in services while just 18% were in goods producing sectors, which include agriculture, construction, and manufacturing. This is not unusual though as most jobs in the modern economy are in the service sector, not goods production. The trade, transportation, and utilities is the largest sector in the county with 27% of all jobs. In contrast, statewide the sector only composed 17% of employment. The second largest share of employment in the county was the government sector with 17% of all jobs, and just under half of these government jobs are in public education. Private education and health services is third at 15% of jobs.

San Joaquin County Employment By Industry
2019

Industry	Employment	Percent of Total
Information	1,700	0.70%
Other Services	7,800	3.00%
Financial Activities	8,000	3.10%
Construction	13,100	5.00%
Total Farm	14,800	5.70%
Manufacturing	19,500	7.50%
Professional and Business Services	19,900	7.60%
Leisure and Hospitality	22,600	8.60%
Educational and Health Services	39,200	15.00%
Government	44,900	17.20%
Trade, Transportation and Utilities	70,000	26.80%

Source: California Employment Development Department, Industry Employment - Official Estimates

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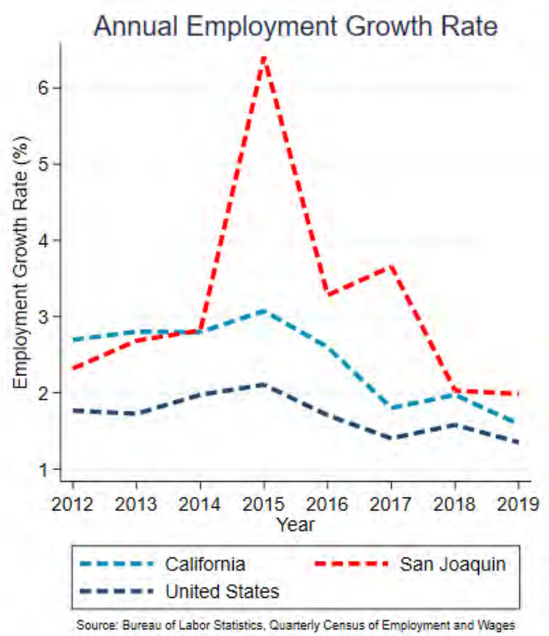
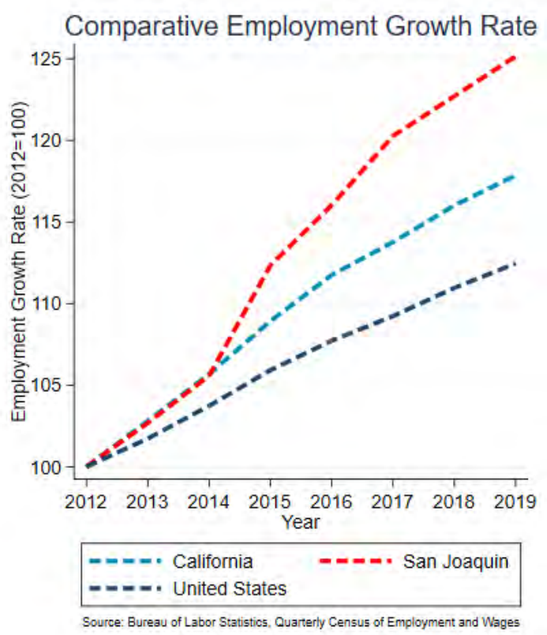
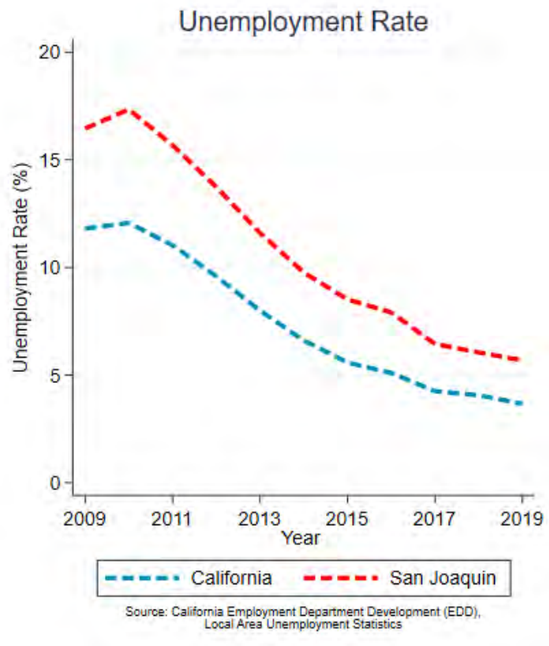
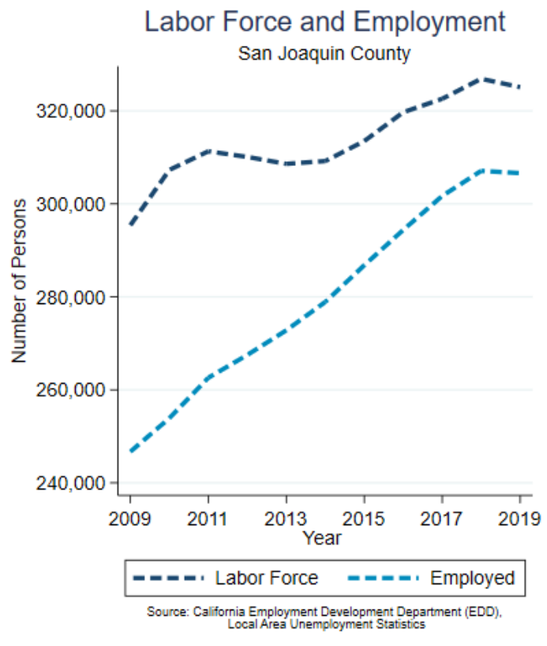
Employment









Employment

While the local growth in the transportation and warehousing sector is clearly important, the scale of the industry is significant even at a national level. In fact when the share of transportation and warehousing employment in the county is compared to the share for the nation as a whole, a ratio called the location quotient (LQ), we find that in 2019 San Joaquin county had the third highest concentration of any metropolitan area (MSA) in the nation.

The table below lists the top-10 MSAs in the nation by their comparative share of employment. It is interesting to see that while smaller in terms of total employment, the county actually has a higher concentration of transportation and warehousing employment the than Riverside-San Bernardino-Ontario MSA in California's Inland Empire region. This level of concentration has grown markedly in the past decade and transformed the county (referred to as the Stockton-Lodi, CA MSA in the table) from a locally important center to a inter-regional hub for the Northern California Megaregion. Further context of this is given by noting that of those MSAs with a higher concentrations the Laredo, TX MSA is a significant entry point along the US-Mexico boarder and the Memphis MSA is the headquarters of FedEx.

The table to the right shows the county's employment by type of job or occupation. This occupational data shows that low-wage positions in health care support, transportation & material moving, sales and food preparation & service are most common in the county. Overall, about two-thirds of jobs in the county are in low-wage occupational categories with an average annual wage below $40,000. In total, low-wage occupation grew by 25,250 in the period from 2014 to 2019.

High-wage occupations are the least common in the county, accounting for just 14% of jobs. In inflation adjusted term the mean wage for the high wage occupations increased by 5% from 2013 to 2018, ahead of the 4% growth seen in middle wage occupations but less than the 6% growth seen in low wage occupations.

Education, training and library occupations recorded 4,120 new jobs between 2014 and 2019, the largest growth among middle wage occupations. Construction and extraction occupations had the largest rate of growth among middle wage occupations, growing by 52% in the period as recovery from the Great Recession accelerated.

Metropolitan Statistical Areas with Largest Transportation & Warehousing Employment Share

2019

Metropolitan Statistical Area	Establishments	Employment	Average Annual Wage	Employment Location Quotent (LQ)
Laredo, TX	1,294	15,808	$41,734	4.09
Memphis, TN-MS-AR	1,253	74,652	$64,918	3.23
Stockton-Lodi, CA	***743***	***29,468***	***$49,129***	***3.08***
Houma-Thibodaux, LA	300	9,149	$79,826	2.93
Chambersburg-Waynesboro, PA	133	6,481	$44,745	2.9
Riverside-San Bernardino-Ontario, CA	3,585	136,338	$45,437	2.4
Harrisburg-Carlisle, PA	518	29,362	$49,542	2.39
Joplin, MO	208	6,664	$48,246	2.28
Lakeland-Winter Haven, FL	547	19,278	$45,465	2.28
Hagerstown-Martinsburg, MD-WV	228	8,417	$36,119	2.25

Source: Bureau of Labor Statistics, Quarterly Census Employment and Wages (QCEW)

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Employment and Annual Wages By Occupation in San Joaquin County

2019

Occupation	Employment	Mean Wage
Management	10,220	$112,440
Legal	800	$104,380
Healthcare Practitioners and Technical	13,030	$98,410
Architecture and Engineering	1,870	$90,520
Computer and Mathematical	1,890	$83,360
Business and Financial Operations	8,670	$71,650
High Wage Totals (Over $70,000 Annually)	**36,480**	**$94,927**
Life, Physical, and Social Science	1,900	$69,430
Protective Service	6,720	$62,080
Educational Instruction and Library	20,440	$59,970
Community and Social Service	3,690	$59,080
Construction and Extraction	10,410	$57,730
Arts, Design, Entertainment, Sports, and Media	1,630	$56,500
Installation, Maintenance, and Repair	9,530	$52,180
Office and Administrative Support	28,960	$42,760
Production	14,400	$40,190
Middle Wage ($40,000 to $69,999 Annually)	**54,320**	**$58,601**
Sales and Related	22,770	$39,250
Transportation and Material Moving	41,310	$38,820
Building and Grounds Cleaning and Maintenance	6,080	$33,640
Personal Care and Service	5,060	$32,780
Healthcare Support	13,690	$30,500
Farming, Fishing, and Forestry	8,340	$29,630
Food Preparation and Serving Related	21,460	$29,080
Low Wage (Less than $40,000 Annually)	**162,070**	**$36,858**

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics

Employment Within San Joaquin County

Indicators on smaller geographies employment take longer to be released as disclosure and confidentiality concerns become more pronounced. As a result, the data on this and the opposite page reflect the most recently available statistics.

The map to the right shows the geography of employment across the County by Census County Division (CCD). Four of the nine county divisions account for 92% of jobs. Among the four, Stockton has the largest number of jobs with nearly three times the jobs of Tracy, the second largest county division in terms of employment.

Employment in the Lodi and Manteca county divisions are similar in size with just under 29,000 jobs in both accounting for about 13% of total employment. The Interstate and State Highway corridors link the four largest county divisions with most of the other smaller employment county divisions along the more rural eastern portions of the county.

The table below shows employment dynamics using the change in jobs across each county divisions from 2012 to 2017 as a measure. Among the four largest county division the growth experienced by the two county divisions in the south, Manteca and Tracy, is notably higher than employment growth in the two northern county divisions, Lodi and Stockton. The 10% compound annual growth rate (CAGR) for Tracy between 2012 and 2017 was five times higher than Stockton's 1.9% rate. That difference meant that despite having just over a third of Stockton's jobs Tracy actually grew by some 4,500 more jobs during this period. Similarly, despite having nearly the same employment Manteca's job grew by 3,700 more than Lodi giving Manteca a 5.7% CAGR compared to Lodi's rate of 2.5%. This geography in part reflects the growth of the transportation and warehousing industry which is concentrated in the southwest of the county to facilitate goods movement to the Bay Area. It is also a dynamic that is reflected in population and other indictors discussed elsewhere in this Index and is linked to the growing inter-regional integration that has been characterizing the county in recent years.

While most of the other county divisions also experienced employment growth, their size makes them particularly sensitive to the loss or addition of large employers. Nonetheless, it is interesting to see that it is the two most northern of the small CCDs (Lockeford and Thornton) that had the greatest rates of employment growth.

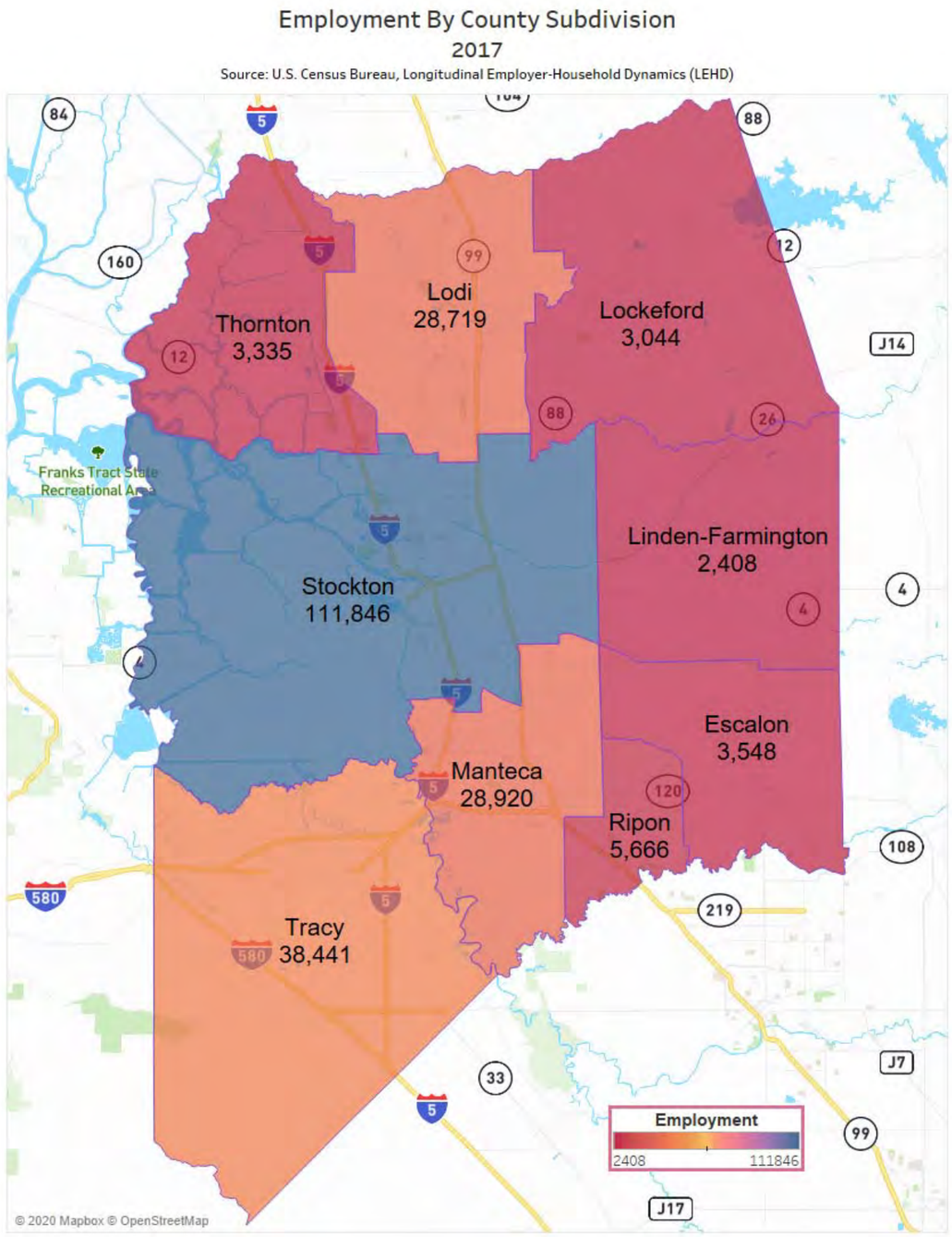
Employment Growth By County Subdivision

Census County Division (CCD)	2012	2017	Difference	Compound Annual Average Growth Rate
Stockton	101,832	111,846	10,014	1.90%
Tracy	23,854	38,441	14,587	10.00%
Manteca	21,914	28,920	7,006	5.70%
Lodi	25,357	28,719	3,362	2.50%
Ripon	4,319	5,666	1,347	5.60%
Escalon	2,882	3,548	666	4.20%
Thornton	2,390	3,335	945	6.90%
Lockeford	1,858	3,044	1,186	10.40%
Linden-Farmington	2,413	2,408	-5	0.00%

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD)

Economy

Employment Within San Joaquin County



Income

Why is this Important?

Income is an important measure of a community's standard of living. Regions with higher income levels tend to have more educational, recreational, and entertainment opportunities as well as lower crimes rates. Income is not simply made up of the money people earn from work, but also includes interest, dividends, social security, workers comp, pensions and non-cash transfer payments such as food stamps, health benefits and subsidized housing.

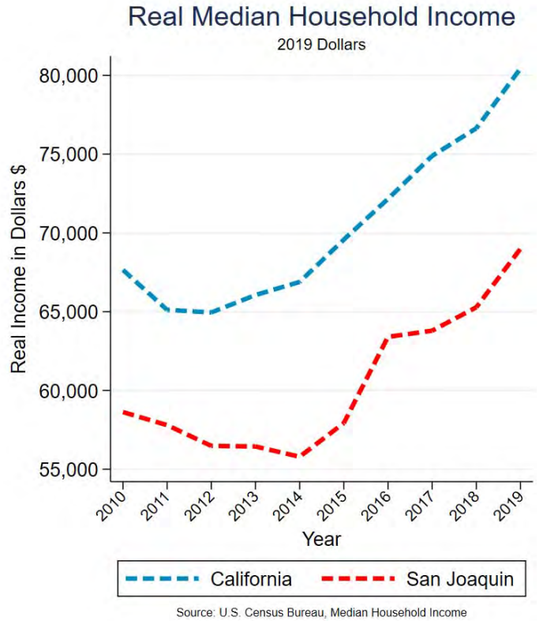
How are we doing?

The figure below left reports real income per capita. It shows that the county followed a pattern similar to the US and California, with real per capita income sluggish coming out of the recession until 2014 and 2015 when average incomes rose significantly. The figure below right shows state and county real median household income. In this measure the impacts of the recession were more enduring, with declining median household income until 2015 and then only reaching 2010 level in 2016. Since then income growth slowed until picking up again in 2019.

The distribution of income is a measure of inequality. The figure on the top left of the opposite page measures that inequality as the ratio of average income for the lowest 20% of a population to that of the highest 20% . That ratio shows that income inequality has been around 13.5 most years with some higher values in 2014, and 2017. Statewide, the ratio was 17.6 during the period.

Income is also an important measure of poverty. The figure on the top right of the opposite page shows the official income based poverty measure for California and the county. It shows that since 2014 the county's poverty rate has declined in four of the past five years.

The Public Policy Institute of California, in collaboration with researchers at Stanford, calculated an adjusted poverty measure that takes into account the cost of living in different areas. This adjusted measure was most recently updated at the county level for the three year period from 2016-18. In the figure on the bottom left of the opposite page the adjusted poverty rate for the county is shown to be 15.2% compared to the average official rate of 14.7% during that period.



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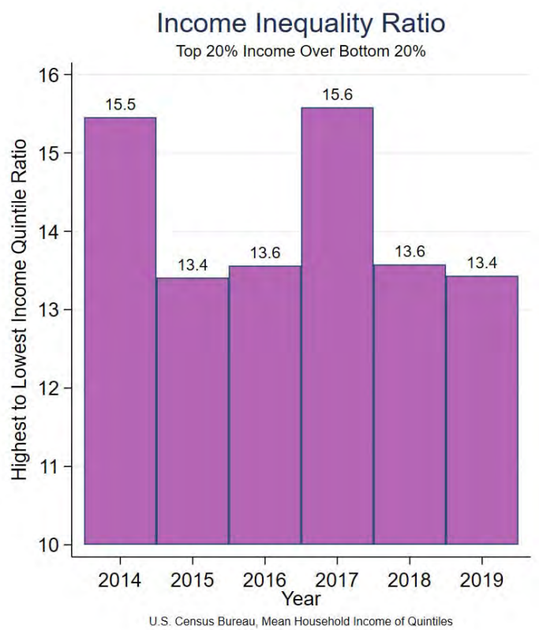
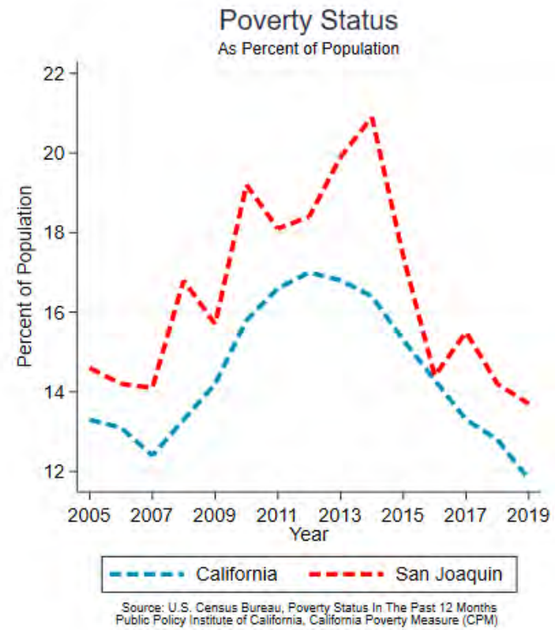
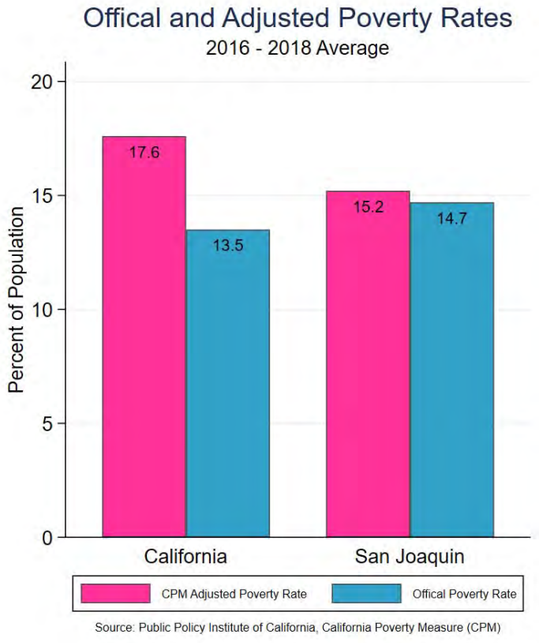
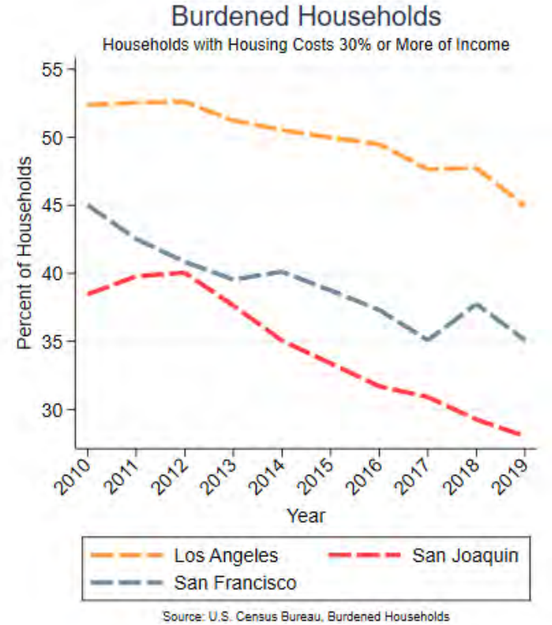








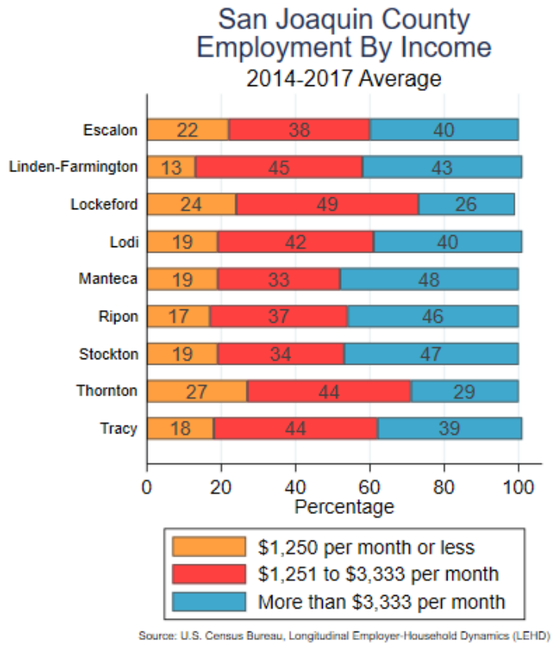
Employment & Income Within San Joaquin County

In terms of the structure of earnings across county divisions, Lodi, Stockton, and Manteca all have an estimated 19% of jobs with earnings of $1,250 per month or less. The Tracy county division has slightly less lower earners with just 18% earning $1,250 per month or less. Among the larger employment county divisions Manteca and Stockton had the highest share of jobs with earnings over $3,333 per month with 48% and 47% respectively. In comparison, Lodi and Tracy had respectively 40% and 39% of jobs paying $3,333 per month.

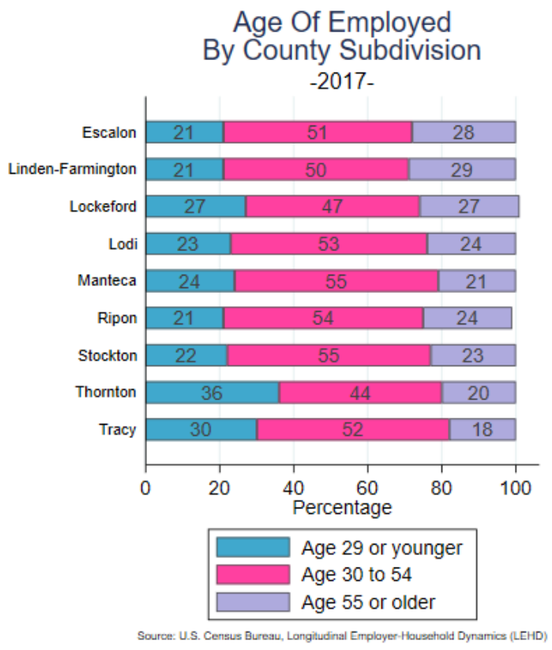
The age of workers in the county divisions is reported in the figure to the right below. Accordingly, Tracy had 30% of its jobs with workers 29 years old or younger, giving it the largest share among the county divisions with higher employment levels. Manteca, 24%, Lodi, 23%, and Stockton, 22%, had notably less younger workers. In contrast, Lodi had the biggest share of workers 55 years or older with 24%. It was followed by Stockton 23% , Manteca 21%, and Tracy 18% . Thornton with 36% of its jobs undertaken by individuals 29 years old or younger had the largest share of younger workers among the county divisions with less employment. Linden-Farmington had the largest share of workers 55 years or older with 29%.

the table and figure on the opposite page reports household income across county divisions. Among the larger county divisions Tracy has the highest average income. Since a median household income that is significantly less from the average suggests that a few household hold a large share of income, the gap between average and median household income can identify areas where income inequality is relatively high. In terms of that measure Tracy's median income of 86% of the average suggests it has the least inequality. Similarly, with median household income just 72% of the average Stockton appears to have the highest inequality in the county.

The figure on the bottom of the opposite page reports the distribution of household income across divisions. It shows that Stockton has the largest share of households with income less than $25,000, 26%, and with income between $25,000 and $49,999, 25%. Among the larger county divisions, Manteca has the largest share of households with income between $50,000 and $99,999, 34%. Tracy recorded the largest share of households with income between, $100,000 and $199,000, 36%, as well as the greatest share with income $200,000 or more, 10%.



Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD)



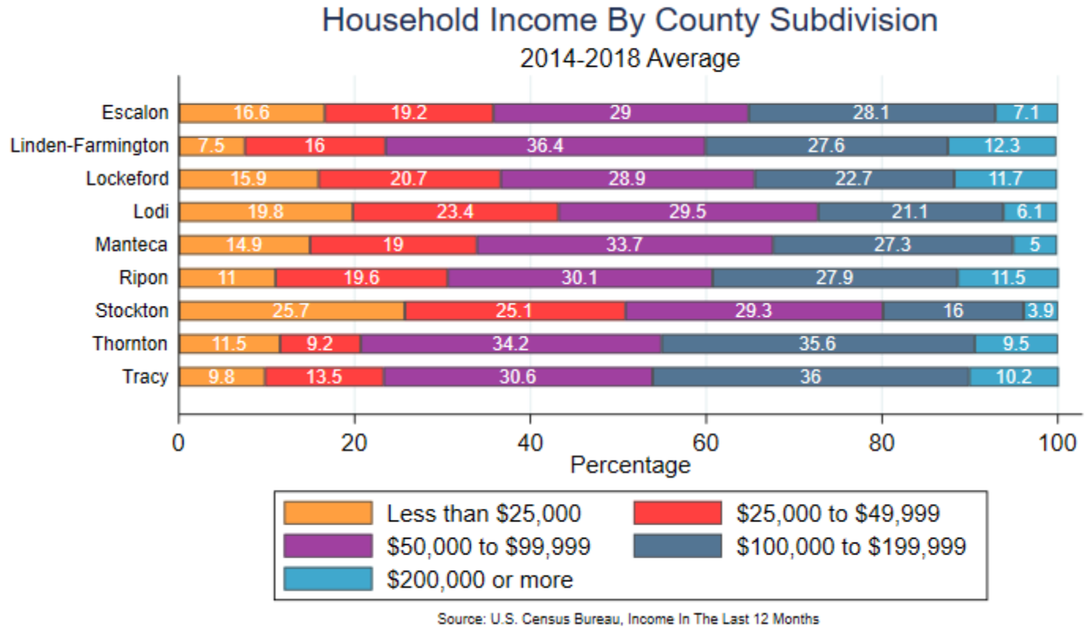
Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD)

Income Within San Joaquin County

Median and Mean Household Income By County Subdivision
2014-2018 Average

Census County Division (CCD)	Number of Households	Median Income	Average Income
Escalon	4,712	69,070	89,466
Linden-Farmington	1,936	83,667	112,932
Lockeford	4,127	71,867	99,420
Lodi	29,489	59,151	81,452
Manteca	32,666	71,543	85,854
Ripon	5,948	83,770	105,307
Stockton	110,664	49,126	67,954
Thornton	4,242	93,296	112,007
Tracy	32,943	92,686	107,876

Source: U.S. Census Bureau, Income In The Last 12 Months



Source: U.S. Census Bureau, Income In The Last 12 Months

Output

Why is this Important?

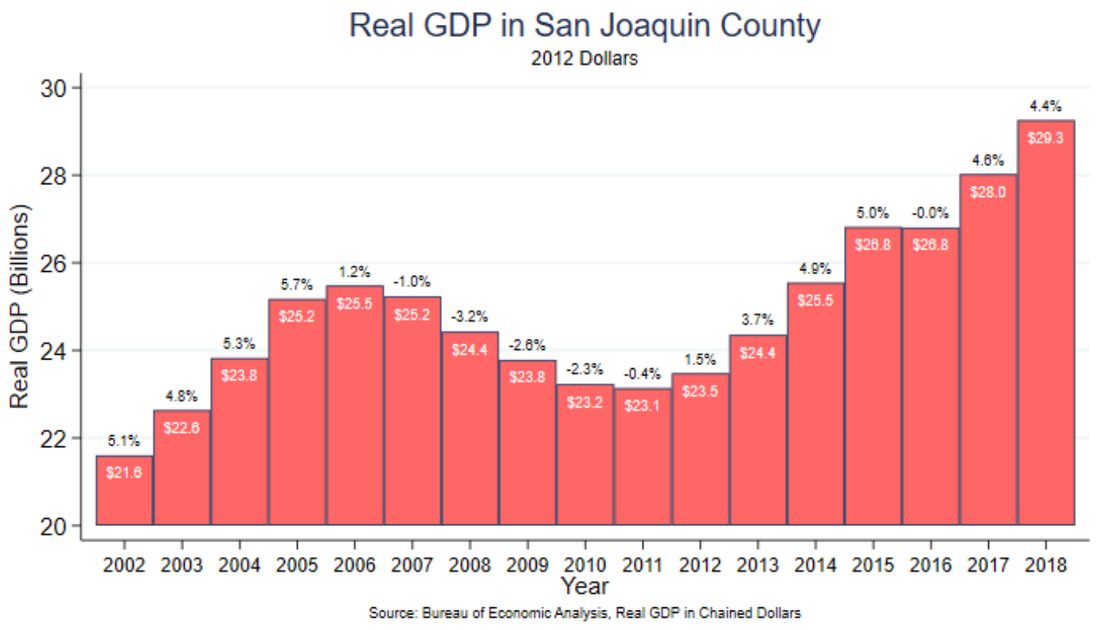
GDP is the broadest measure of economic activity. It is the sum of the value of all goods and services produced in an economy. GDP and output are highly correlated with incomes and the wellbeing of a region. The more a region can produce, the more income the region is generating and the more workers in that region can earn.

How are We Doing?

Current dollar GDP in San Joaquin County was $32.3 billion in 2018. Real GDP growth, which controls for inflation, increased at a 4.4% rate in 2018. While a slightly slower rate of growth than 2017 it follows several years of sustained growth between 2012 and 2015 as the county recovered from the Great Recession. San Joaquin County's real GDP growth in 2018 also marked the second consecutive year that the county's growth exceeded state and national rates following 2016 when real GDP contract slightly.

The table on the right shows real GDP by industry for the county, how it changed between 2008 and 2018, and a location quotient that shows the relative importance of an industry to the local economy. This clearly shows the importance of agriculture to the county economy even as its share and real value has declined slightly. The table also reflects the growing significance of transportation and warehousing in the county economy. With significant continued expansion in recent years transportation and warehousing is expected to reflect growing relative importance in coming years. There is also some evidence of this sector deepening its local impacts with a significant increase in the local importance of wholesale trade between 2008 and 2018.

The performance of high-skill, high-paying sectors like information and professional and business services has been less robust. While both have grown in real terms they remain the sectors with the least local concentration, reflecting a key challenge the county faces in building better opportunities.



Source: Bureau of Economic Analysis, Real GDP in Chained Dollars

Economy

Output

Output By Industry in San Joaquin County

Industry	Real Output 2012$ (in thousands)		Percent of County Total		Location Quotient	
	2008	2018	2008	2018	2008	2018
Ag & Natural Resources	1,557,214	1,316,913	6.40%	4.50%	5.52	3.65
Construction	1,055,899	1,177,106	4.30%	4.00%	1	1.15
Manufacturing	2,554,161	2,636,703	10.50%	9.00%	0.81	0.78
Wholesale Trade	1,546,190	2,130,133	6.30%	7.30%	0.97	1.2
Retail Trade	1,777,957	2,141,689	7.30%	7.30%	1.23	1.25
Trans and Warehousing	1,337,789	2,003,386	5.50%	6.80%	1.83	2.27
Information	377,668	702,808	1.50%	2.40%	0.33	0.39
Financial Activities	5,037,214	6,215,804	20.60%	21.20%	1.12	1.12
Prof & Business Services	1,422,768	1,668,001	5.80%	5.70%	0.49	0.44
Ed & Health Services	2,156,756	2,598,378	8.80%	8.90%	1.06	1.02
Leisure & Hospitality	689,698	825,928	2.80%	2.80%	0.74	0.74
Other Services	591,292	610,707	2.40%	2.10%	1.01	1.06
Government	3,774,667	4,143,028	15.50%	14.20%	1.11	1.2

Source: Bureau of Economic Analysis, Gross Output By Industry

Agriculture

Why is this Important?

Agriculture is one of the most important economic bases of San Joaquin County. Its agriculture lands are some of the most productive in the country and together with its neighbors forms a critical part of the state's economy and the nation's food supply. Agricultural production generates revenue and jobs in related industries such as food processing, transportation, equipment sales, and other vertically integrated production processes.

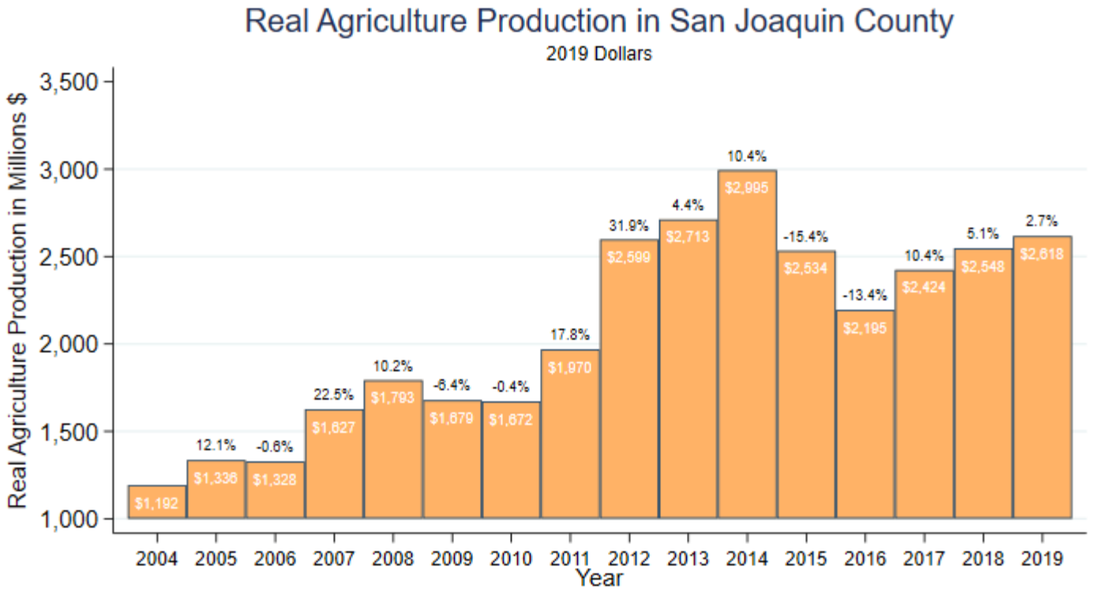
How are We Doing?

Between 2011 and 2014, the value of agricultural output in the county set a new record every year as production shifted towards high-value crops such as almonds that were enjoying enormous price increases. That growth declined in 2015 and 2016 as drought and declining prices impacted production, but the value of the county's agricultural production has again grown in recent years exceeding $2.6 billion in 2019.

While San Joaquin County's grapes, supported in particular by wine grape production, were its top commodity for several years in 2018 they were surpassed by almonds, and in 2019 they were surpassed by both almonds and milk. This change occurred as price declined by nine percent and production decreased by five percent. While almonds remained the most valuable commodity, they decreased in total value by 16% despite a modest increase in price as production declined. Milk's value increased by five percent, driven by a six percent increase in price.

Among the county's other top commodities a changes in the value of walnuts and eggs were particularly significant. While walnut tonnage decreased slightly a 42% increase in price led to the total value of walnuts in the county growing by 37%. Egg production actually decreased by 14%, but a 76% increase in price led to a 52% rise in the total value. These increases in the total value of milk, walnut and egg production largely offset the decline in other top commodities, leaving the overall nominal value of the top-10 commodities at $2.05 billion.

Net income measures the profitability of farming in the county and is an important measure of the overall health of the county's farm economy. The measure includes income of farm proprietors and from corporate farming operations. The majority of



Source: Annual Report of Agricultural Production in San Joaquin County

Economy

Agriculture

farm income accrues to farm proprietors. Net income is an important indicator because the total value of agriculture production does not take into account how changes in costs affect the income or profitability of farming.

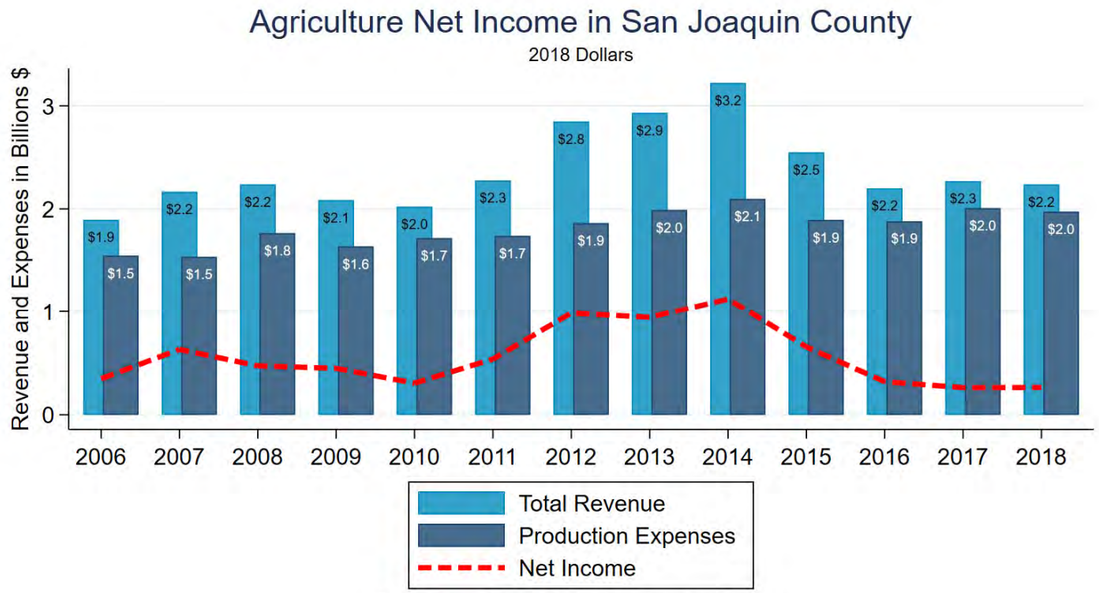
Of course, farm net income is strongly influenced by revenue. However, while the growth in net income increased dramatically from $306 million in 2010 to $1,125 million in 2014 that net income substantially declined with the decreasing revenue in 2015 and 2016. Between 2016 and 2018 despite real revenue increasing by 2%, net income has declined from $320 million in 2016 to $263 million in 2018.

Total and weekly farm wages are shown on the next page. Growing labor costs are shown in those figures to have significantly contributed to rising production expenditures. Between 2014 and 2019, the real total rose by 16% from $498 million to $578 million. Similarly, the average weekly wage rose from $610 in 2014 to $723 in 2019, an 18% increase.

San Joaquin County Top 10 Commodities in 2019

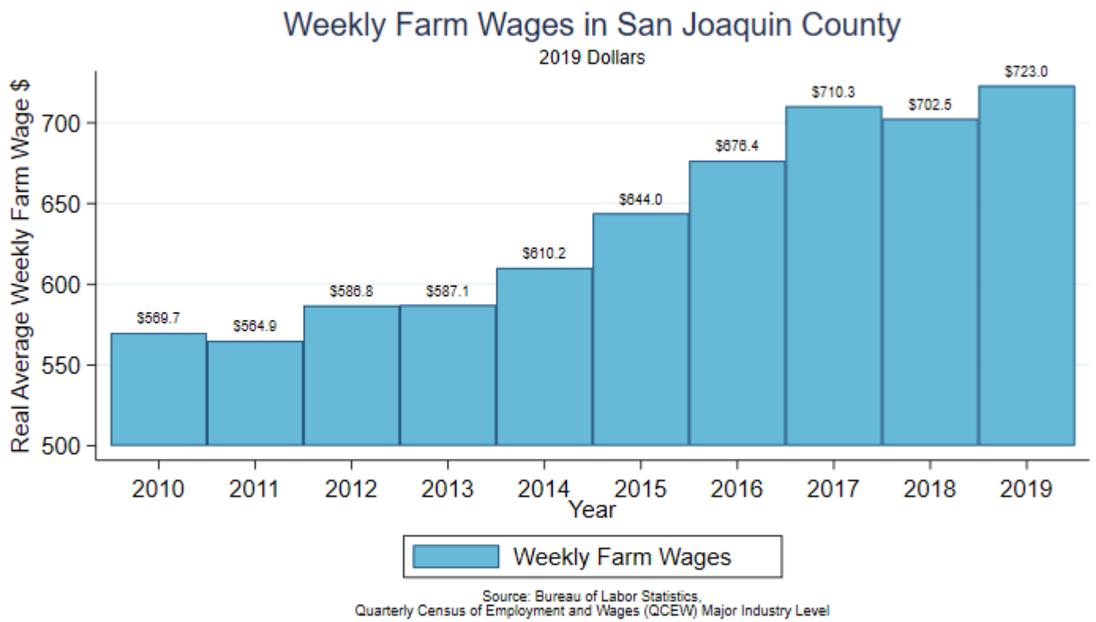
Commodity	Value
Almonds	$449,621,000
Milk	$378,840,000
Grapes	$372,467,000
Walnuts	$290,335,000
Eggs & Chickens	$160,330,000
Cattle & Calves	$102,616,000
Tomatoes	$88,392,000
Cherries	$88,104,000
Blueberries	$60,957,000
Hay	$56,100,000

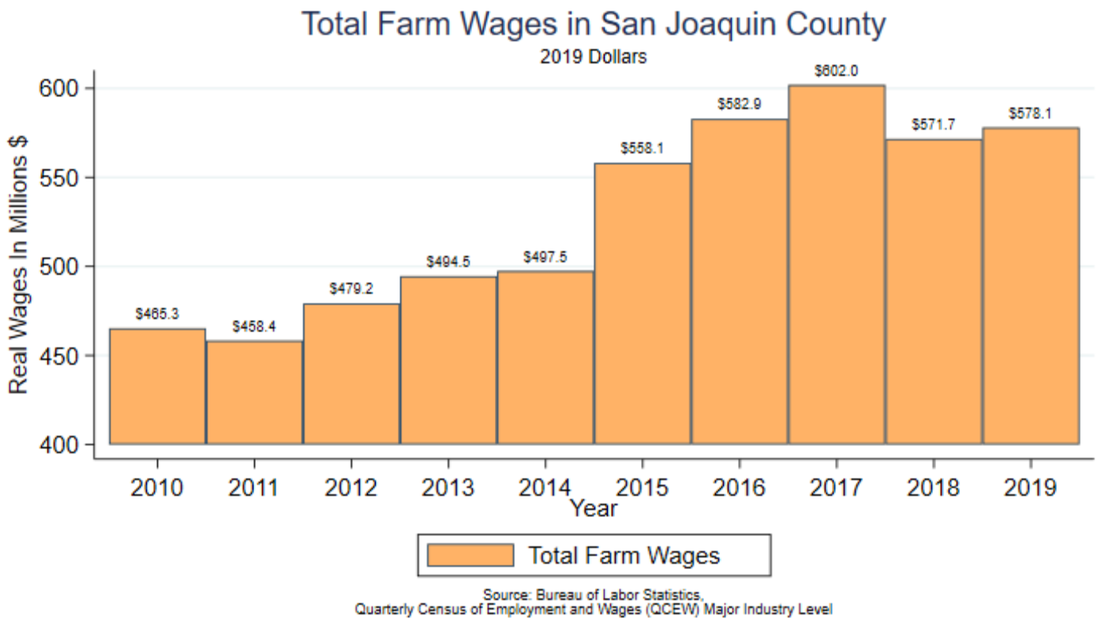
Source: Annual Report of Agricultural Production in San Joaquin County



Source: Bureau of Economic Analysis, Farm Income and Expenses

Agriculture





Economy

Commercial Real Estate

Why is this Important?

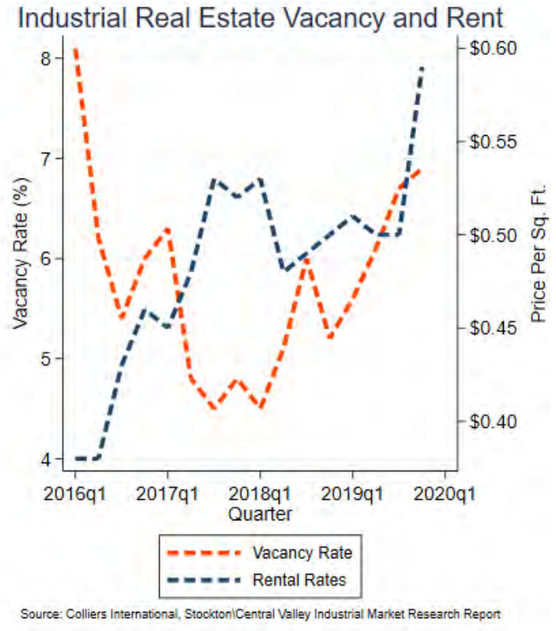
Commercial real estate can act as a leading economic indicator for a region since it reflects business expansion and contractions. When the economy is in expansion and companies expect to do well, vacancy rates fall and rents rise which can stimulate new commercial construction. Conversely, when the economy is in a recession rents fall and vacancies increase.

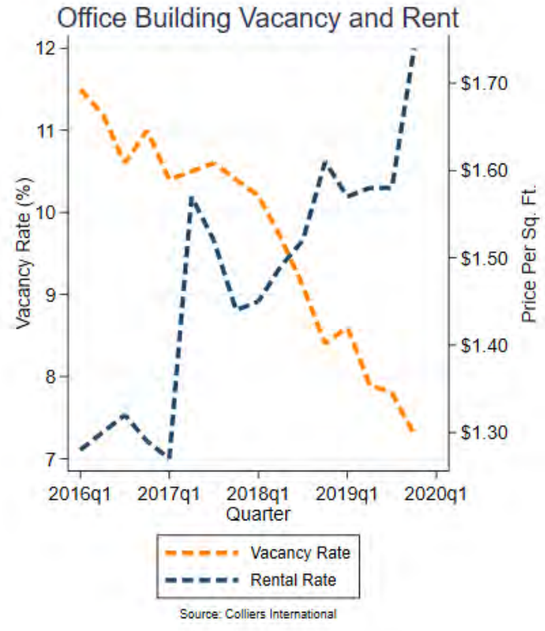
How are We Doing?

After following each other for several years, industrial and office vacancy rates began a marked divergence early in 2018. Since that point, the vacancy rate for industrial real estate start a consistent trend towards higher. While below 5% at the beginning of 2018 by the end of 2019 it has risen to nearly 7%. This rise in vacancies is interesting as the increased supply suggested by the rising vacancy rate has not been accompanied by a decrease in rents. In contrast, after a brief decline at the beginning of 2018 industrial rental rates have continued to rise from less than $0.40 per square foot at the beginning of 2016 to nearly $0.60 per square foot at the end of 2019.

However, this anomaly seems to be a result of the rapid growth in available industrial space that is supporting the expansion of the county's warehousing and logistics industry. As that new space comes online vacancy rates have been rising despite continued strong and growing demand supporting rental rates.

As mentioned earlier, office building vacancy rates have been in consistent decline in recent years. In early 2016 they were near 11.5% and have declined nearly every quarter reported by Colliers International up to the end of 2019 at which point vacancy rates were below 7.5%. Office rental prices have grown during this period increasing from around $1.30 per square foot in 2016 to over $1.70 per square foot by the end of 2019.





Innovation

Why is this Important?

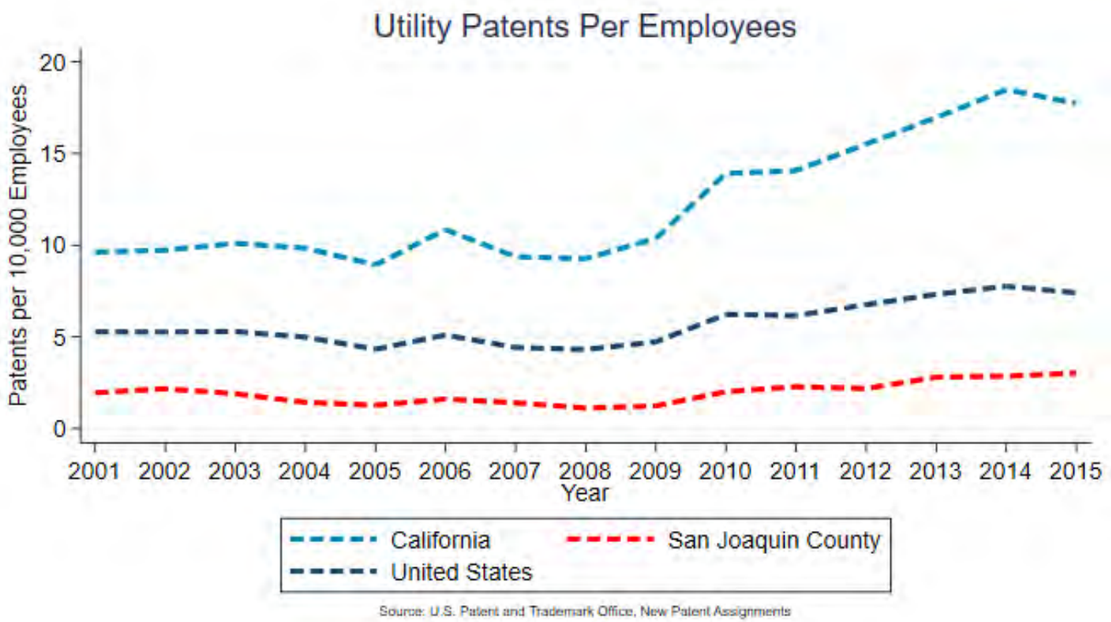
Innovation is a key factor in economic growth and development, especially important for the emergence of knowledge-based economies. Entrepreneurship is another driver of economic growth and reflects a dynamic economy. Good indicators of innovation and entrepreneurship are difficult to identify. However, trends in patents, start-up intensity, births and deaths of firms are indicators of knowledge-creation and entrepreneurial activity.

How are We Doing?

The figure below shows trends in number of patents per employee. It is a useful measure of knowledge intensity of the local economy but limited in several way that are primarily related to the nature of patenting. The figure shows a slow but growing trend in patenting per employee in the San Joaquin County. While the county has tracked pretty closely the national rate a growing gap has emerged with statewide patenting per employee. That gap is even more substantial when the county rate is compared to more knowledge intensive counties in the San Francisco Bay Area.

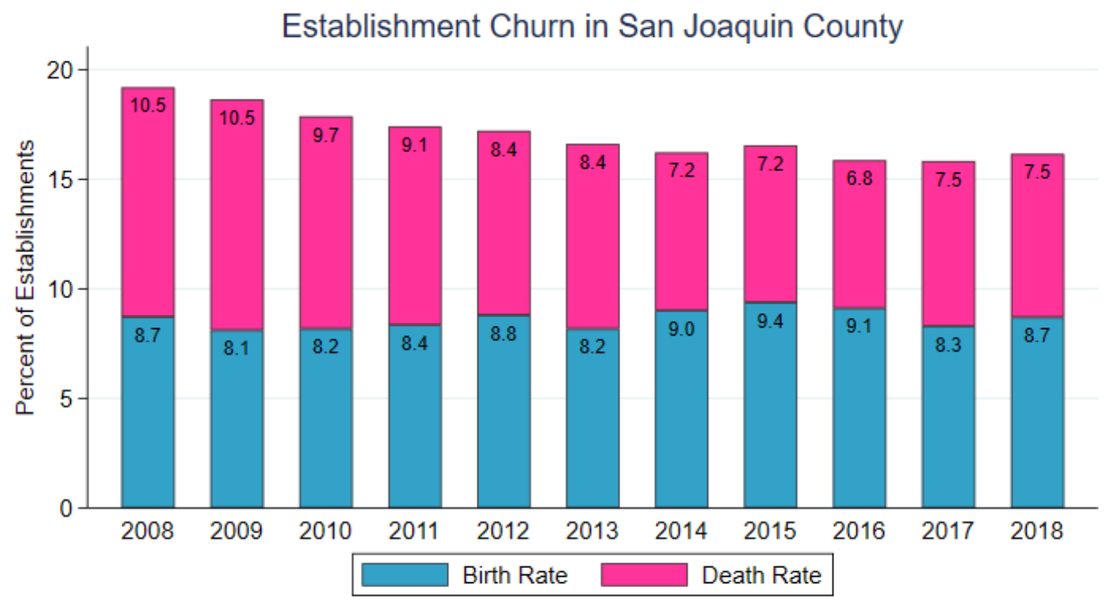
On the bottom of the opposite page start-up intensity, measured as the number of new firms per 10,000 residents, is reported. In the latest available statistics, the county 's start-up intensity is shown to be relatively stable. Between 2010 and 2018 the county averaged 13.4 start-ups per 10,000 residents annually. During the period start-up intensity state-wide grew more, averaging 22.2 start-ups per 10,000 residents annually.

The sum of birth and death rates of establishments is known as the churn rate. It is a measure of the frequency which new businesses are created and existing businesses close. As such it can indicate the rate of entrepreneurial dynamism in an economy. While the figure shows a decline in the county's establishment churn from 19.2 in 2008 to 16.2 in 2018 this has been driven by a reduction in the rate of business exits. In 2008 10.5% of establishments exited annually, but by 2018 that had decreased to 7.5%. Statewide establishment churn has also declined during this period, dropping by 12% from 20.4 in 2008 to 17.9 in 2018. These recent declines are part of a longer trend statewide and in the county. In the 1980s establishment churn decreased three percent and in the 1990s six percent, but those declines were driven by lower establishment entry rates.

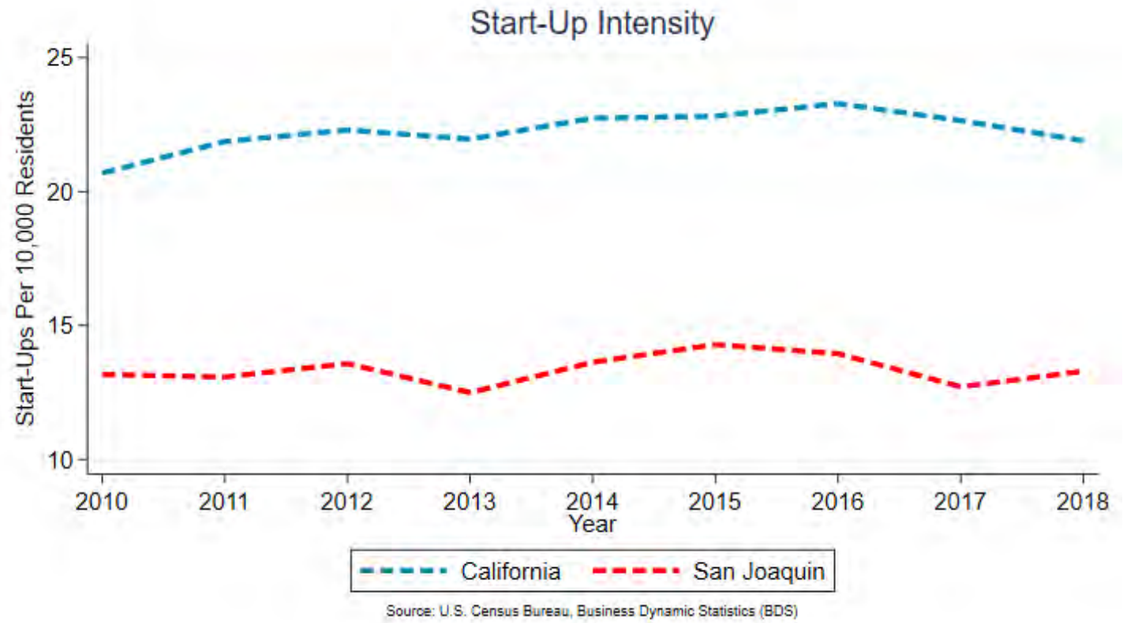


Economy

Innovation



Source: U.S. Census Bureau, Business Dynamic Statistics (BDS)



Source: U.S. Census Bureau, Business Dynamic Statistics (BDS)

People and Society

Demographics

Why is this important?

People are the greatest asset to an area, as they determine what communities, activities, and ideas will prosper. Local residents and migrants contribute as both creators and consumers of business and culture, thus establishing the defining characteristics of a region such as its local economy and sense of community.

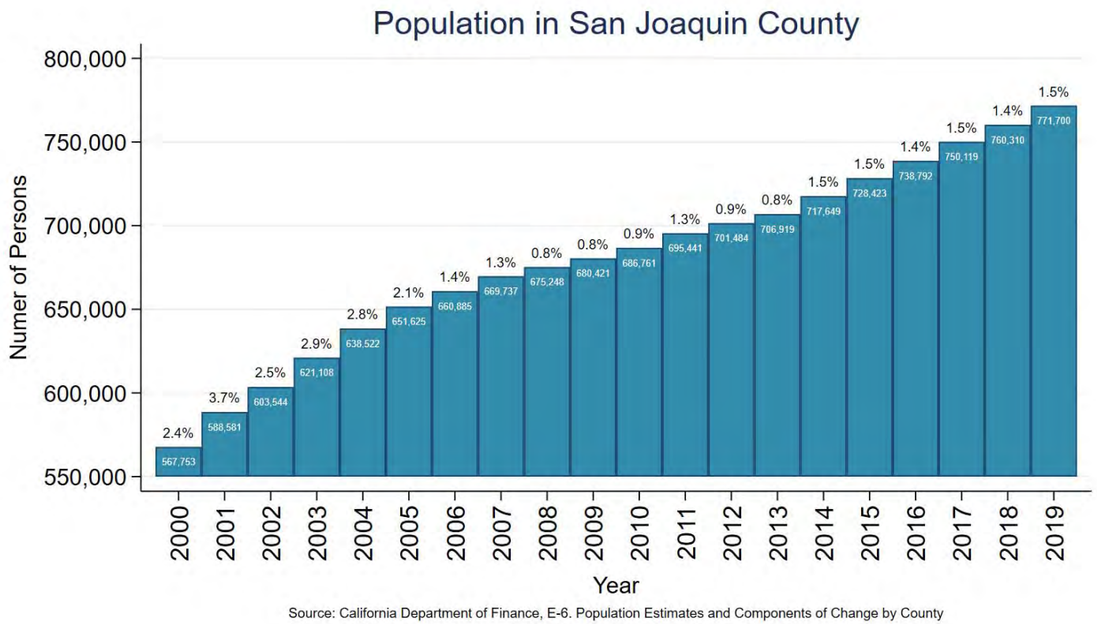
Knowing the value people have to a society, it is important to collect data on shifts that occur due to people being born, aging, and moving around. Demographic data not only offers insight into a community's strengths, weaknesses, and general behaviors, but also impacts how key decisions are made. Metrics such as population growth, birth, and migration rates can help monitor and predict trends of socioeconomic development and potential. Understanding these population dynamics is necessary for informing resource allocation, infrastructure and community planning, and economic policy specific to a region's needs.

Population

In 2019, the population of San Joaquin County reached 771,700, making it the 15th most populous county of California's 58 counties. This equates to an increase of 11,390 residents from the previous year (2018) and a growth rate of 1.50%. Meanwhile the state experienced growth of 0.35%, its slowest growth rate since 1900.

The state and countywide rates of population growth significantly decreased between 2000 and 2009, but they deviated from this trend in 2010. Fluctuations in San Joaquin County's growth rate between 2008 and 2013 were followed by an increase to 1.52% in 2014. From then, the county's growth rate has remained consistent and higher than that of the state, which has continued to trend downwards. San Joaquin County has seen an annual growth rate higher than the statewide rate in all but three of the last twenty years.

Despite this comparatively high population growth, the overall population growth has slowed during the past decade. County growth is on course to rise by about 14% in the 2010s, which if it holds true will make it the slowest rate of population growth in any decade since the County's incorporation in 1850.



Source: California Department of Finance, E-6. Population Estimates and Components of Change by County

Demographics

San Joaquin County encompasses seven incorporated cities in addition to other unincorporated areas listed in the table to the right. Stockton, which is the County seat, had an estimated 312,697 residents in 2019, making it the most populated city in the county and the 13th most populated city in the state. The figure to the lower right shows the borders of the County's incorporated cities.

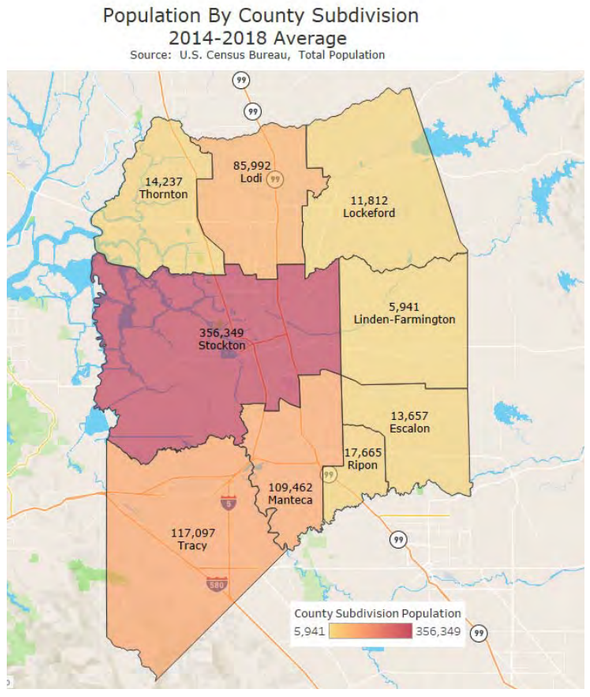
Using Census defined county divisions, the figure below illustrates the distribution of the County's entire population. That figure shows that among the nine county subdivisions, Tracy, Manteca and Lodi follow Stockton in total population. Among the more rural portions of the County, the Linden-Farmington area has the smallest population with just under 6,000 residents.

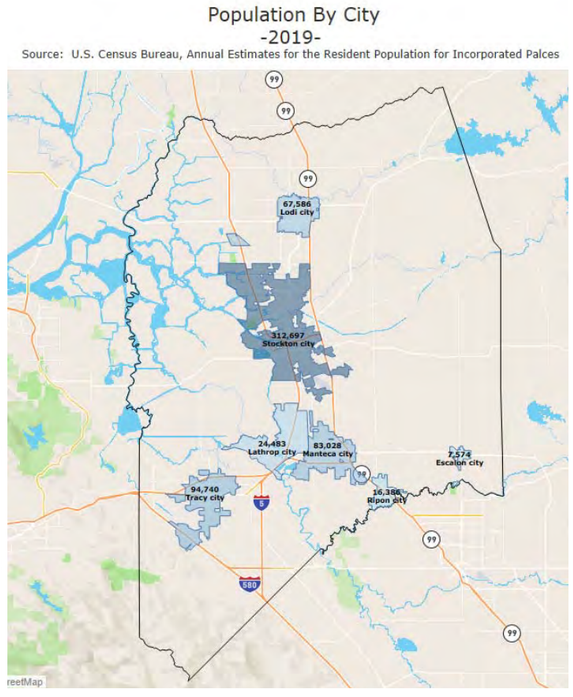
In terms of population growth, the rate of growth is higher among communities in the southwest of the County. As shown in the table to the right Lathrop, Manteca, Ripon and Tracy all had double digit growth rates between 2010 and 2019. It is also notable that the growth of those cities accelerated in the second half of the decade.

Population in San Joaquin County

	Popula-tion	Population Change		
	2019	2010-2014	2015-2019	2010-2019
Total County	762,148	3.60%	5.50%	10.90%
Escalon city	7,574	2.90%	1.30%	6.20%
Lathrop city	24,483	10.20%	20.70%	38.40%
Lodi city	67,586	2.20%	5.20%	8.60%
Manteca city	83,028	8.00%	10.60%	22.60%
Ripon city	16,386	3.80%	7.90%	13.40%
Stockton city	312,697	2.80%	2.70%	6.80%
Tracy city	94,740	2.50%	9.00%	13.30%
Unincorporated	155,654	3.40%	4.80%	10.10%

Source: U. S. Census Bureau, Annual Estimates for the Resident Population for Incorporated Places



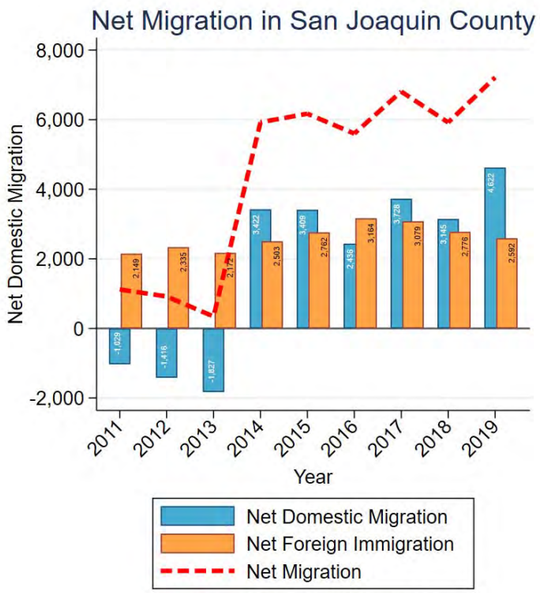


Demographics

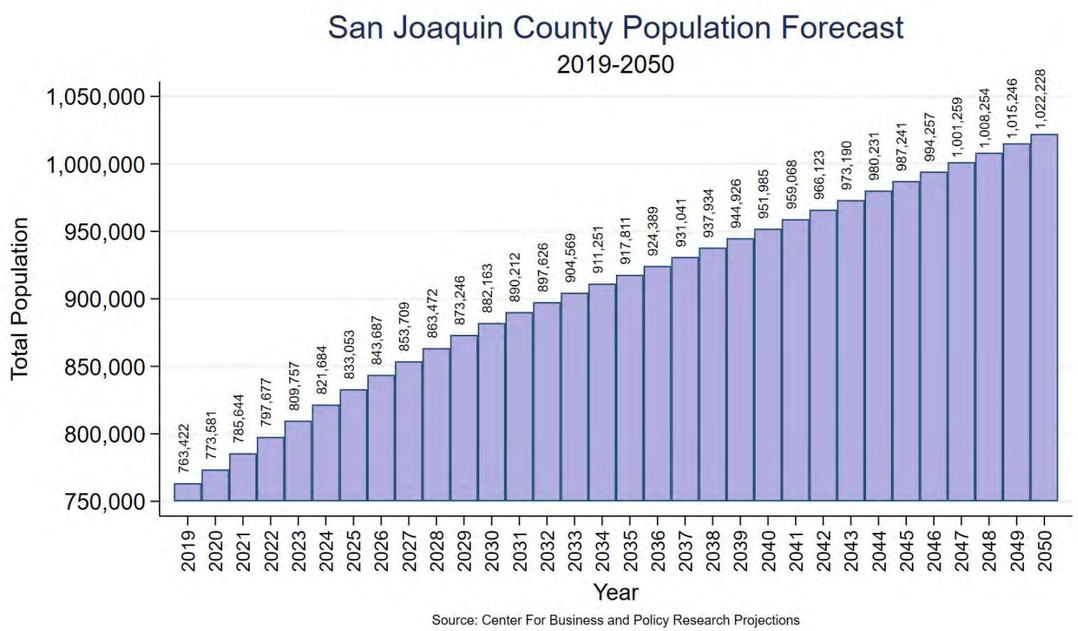
Migration

Migration patterns are determined by several factors in both the places of origin and destination. In addition to natural increase, changes in migration trends can drive population growth or decline. In 2019, net migration in California was negative for the first time since the 2010 census, as domestic outmigration overtook foreign immigration. Fluctuations in net migration are often difficult to predict because of the many influences on it, but with the exception of 2008 and 2009, migration has contributed to the population increase in San Joaquin County every year since 2000.

Domestic migration is generally the most variable component of population change. Between 2006 and 2013, more people left San Joaquin County for other places in the country than moved in. However beginning in 2014, inbound domestic migration has begun to increase, driving the rise in net migration to the region. Some of this inbound domestic movement may be driven by higher living costs and housing markets of neighboring counties such as those in the Bay Area, encouraging movement to more affordable areas like San Joaquin County. Net foreign immigration into the area has remained more stable with an average of approximately 2,800 new residents every year since2000.



Source: California Department of Finance, E-6
Population Esitmated and Components of Change by County



Source: Center For Business and Policy Research Projections

People and Society

Demographics

Birth Rates

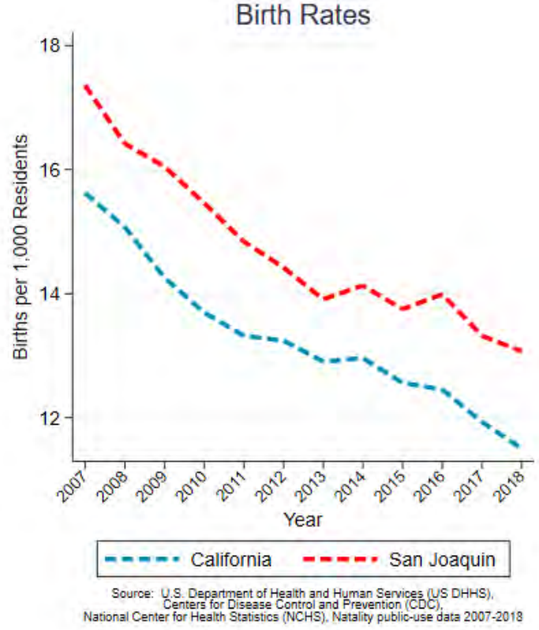
A region's birth rate can inform analyses of economic development, reproductive health, and social change. Birth rates can also serve as indicators of a community's optimism about the future. Considerations of job security and the economy, healthcare and childcare costs, housing markets, and perceived political stability can all affect people's decisions regarding when and whether to have children. A decline in births also amplifies age imbalance, which can affect forecasts of the available workforce.

Across the nation, birth rates are declining. In 2018, California experienced its slowest population growth to date, in large part due to its low birth rate of 11.3 births per 1,000 residents. Although San Joaquin County's birth rate has been consistently higher than the state's, the county has followed the trend of decline during the past decade. In 2018, the CDC recorded 12.8 births per 1,000 people in the county, down from 17.6 births per 1,000 people in 2007. Although the number of births still outnumbers the number of deaths, natural population increase is slowing.

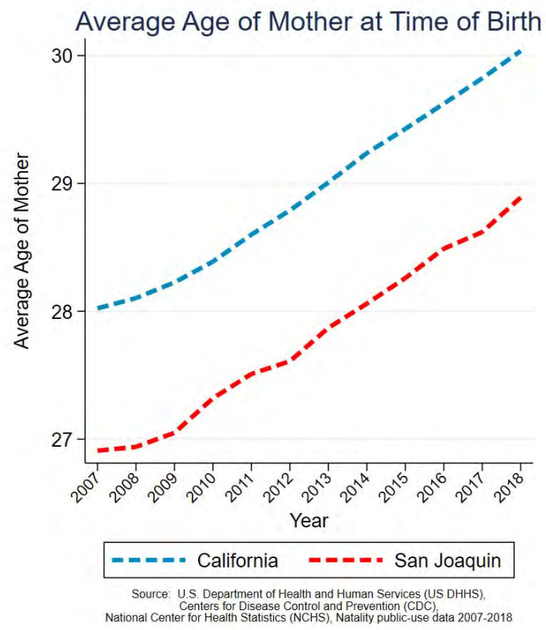
Age of Mothers

Similarly to birth rates, the age at which mothers give birth is an important public health indicator that can provide insight into a region's level of resources, healthcare and otherwise, and its residents' perceptions of future stability and opportunity. The age of mothers is also related to health outcomes such as risks of complications during pregnancy and birth defects. The average age of mothers varies by geography, race, and marriage status, as well as access to higher education and career opportunities for women.

Nationwide, statewide, and locally, mothers are giving birth later in life. In addition to the effects of social, cultural, technological, and economic changes, the rise in age is in part due to a decline in births to teenagers. The average age of a San Joaquin County mother at the time of birth was just under 29 years old in 2018, up from 27 years old in 2007. In 2018, the average age of a California mother at the time of birth was approximately 1 year older than their San Joaquin County counterpart, a gap that has remained consistent throughout the past decade.



Source: U.S. Department of Health and Human Services (US DHHS),
Centers for Disease Control and Prevention (CDC),
National Center for Health Statistics (NCHS), Natality public-use data 2007-2018



Source: U.S. Department of Health and Human Services (US DHHS),
Centers for Disease Control and Prevention (CDC),
National Center for Health Statistics (NCHS), Natality public-use data 2007-2018

Human Capital

Why is this important?

Human capital refers to the experience, knowledge, qualifications, education, and skills that have the potential to contribute to individual income, productivity, and innovation. Higher levels of human capital are correlated with higher earnings and employment opportunities. Thus investing in human capital is not only necessary for building the economic health of a region, but vital for the prosperity and security of its individual residents.

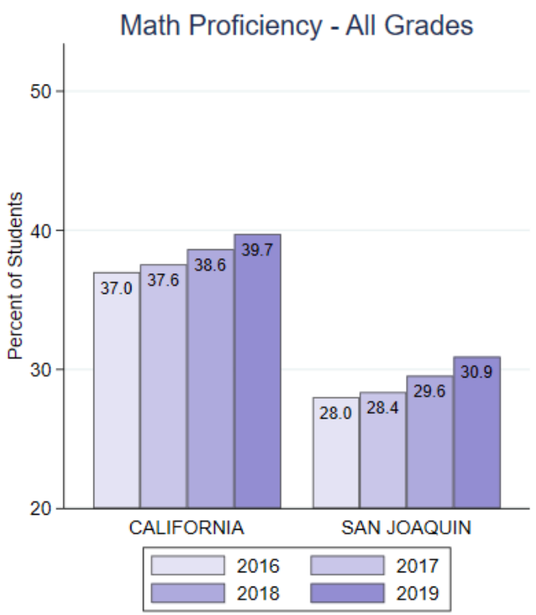
Subject Proficiency

One way in which we invest in our collective human capital formations is through public schools that are funded through taxes and ensure that citizens have the basic skills needed for employment. Research indicates that a student's third grade reading level is a predictor of whether or not the student will graduate from high school. To assess the health of our human capital, San Joaquin County's educational performance data is presented in comparison to the state's. California adopted the Common Core State Standards in 2010 and began implementation in 2014. This included revised curriculum, instruction, and standardized testing.

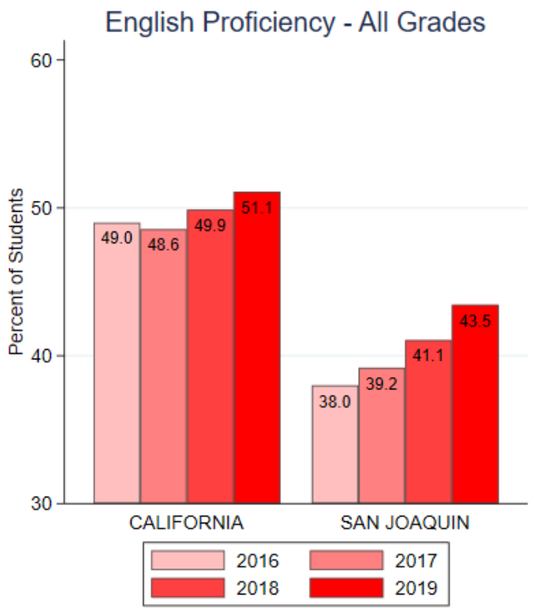
The Smarter Balanced Summative Assessment is an end of year, standardized test created and distributed by the California Department of Education. Students take this test in third to eighth grades and again in eleventh grade as a measure of subject proficiency. English language art and mathematic scores are presented for third, eleventh, and all graders from 2016 to 2019 in California and San Joaquin County.

The proportion of math proficient students decreases while the proportion of English proficient students increases between the third and eleventh grade. For both county and state, from 2016 to 2019, third grade proficiency levels of both subjects have seen encouraging annual increases. Eleventh grade scoring in the state has fallen slightly, while San Joaquin County's has risen.

Despite attainment for both subjects in the county remaining below that of other Californians, the proficiency attainment gap is narrowing. Between 2016 and 2019 the proficiency attainment gap for third graders declined by 23% in math and 38% in English. The gap reduced similarly for eleventh graders with a 22% in math and a 52% reduction in English.

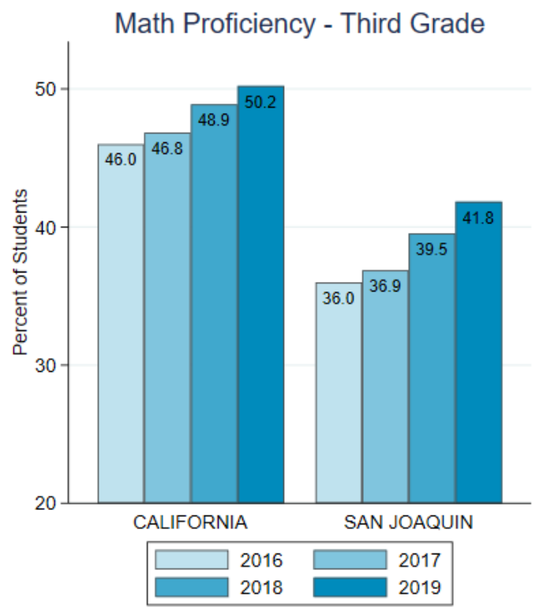


Source: California Department of Education, Smarter Balanced Assessment Test Results



Source: California Department of Education, Smarter Balanced Assessment Test Results

Human Capital



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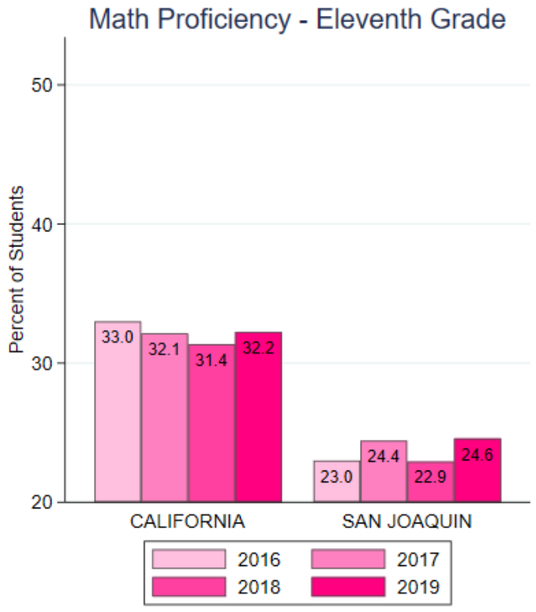

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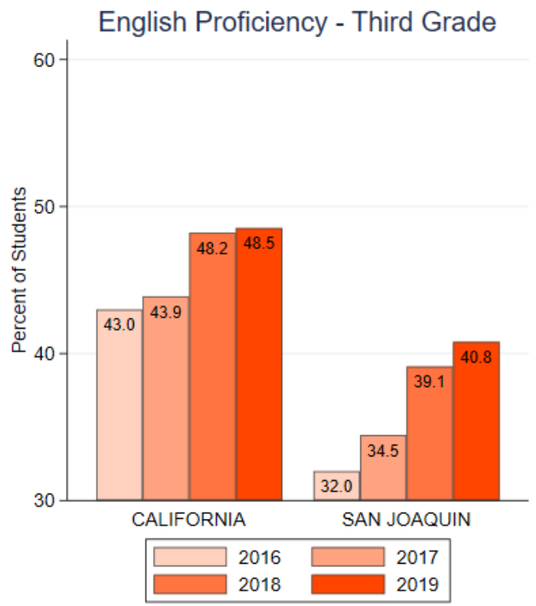

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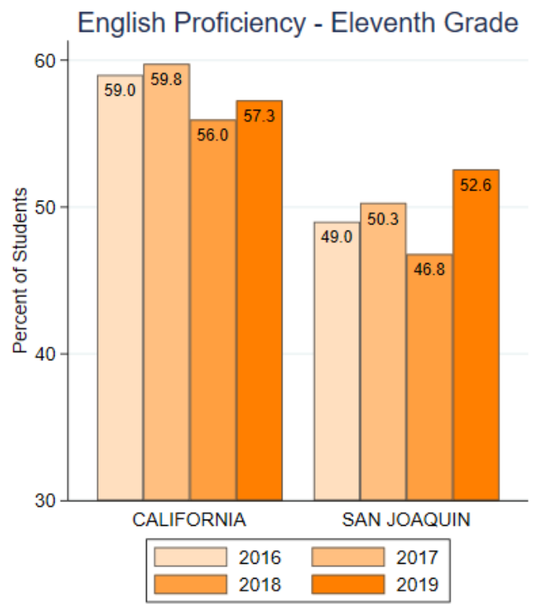


Source: California Department of Education, Smarter Balanced Assessment Test Results

Human Capital

High School Graduation

High school graduation is an important milestone in a student's life, as well as a requirement for most jobs and higher education opportunities. Positively correlated to future earnings and health, the high school graduation rate is another indicator of a region's human capital.

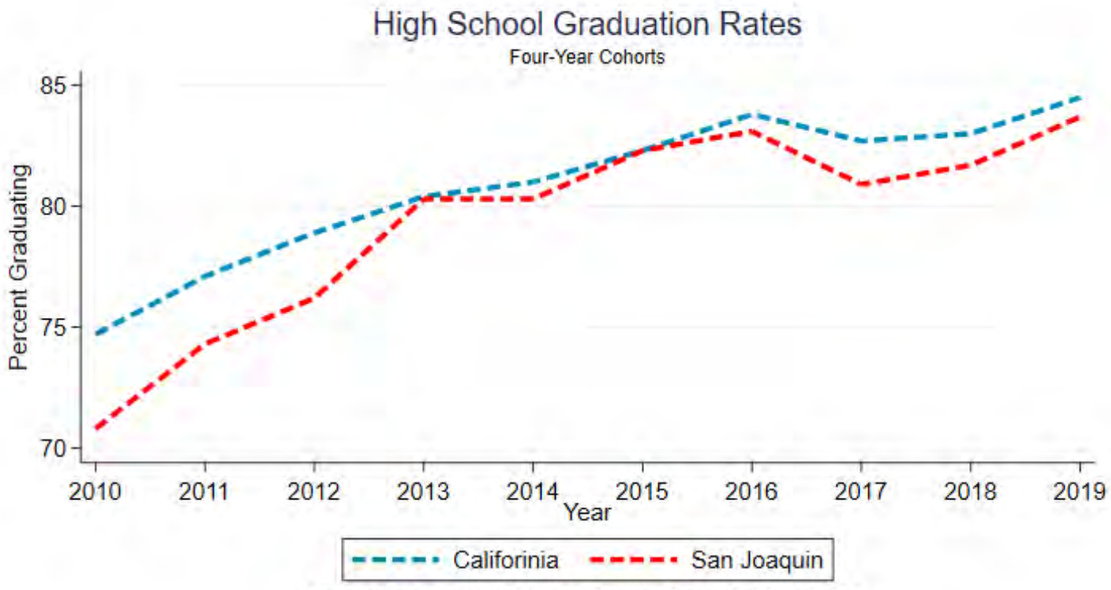
Four-year cohort high school graduation rates were collected from the California Department of Education (CDE) and are graphed below. From 2010 to 2019 high school graduation rates have greatly increased in San Joaquin County and for the state as a whole. Graduation rates are now at their highest levels with the 2019 graduation rate in San Joaquin County at 83.7%, only slightly below 84.5% for the state. The CDE changed its methodology for calculating adjusted cohort graduation rates in 2017, which may account for the supposed decrease between 2016 and 2017. Caution should be taken when comparing with data prior to the revision.

When categorized by race and ethnicity, the only decreases in graduation rate from 2017 to 2019 in San Joaquin County were seen among American Indian or Alaska Native students and those who identified as two or more races. Although they make up only 1% of the cohort in the county, a decrease of 5.6% is still worth noting as American Indian and Alaska Native students have historically had lower graduation rates, both county and statewide.

Between 2017 and 2019, the greatest gains in San Joaquin County were made among Pacific Islanders, with an increase in graduation rate of 6.6%. It is again important to note that Pacific Islanders make up less than 1% of the cohort. The graduation rate among African American or Black students also grew noticeably by 6.2%. They make up 8.8% of the 2019 cohort.

There remains a wide achievement gap by race and ethnicity. Filipino students graduated at a rate 28.1% higher than American Indian and Alaska Native students did.

In addition to disparities by race and ethnicity, students can face a multitude of disadvantages that affect their educational outcomes, such as being homeless or learning English as a second language. Over the past three years, graduation rates for disadvantaged youth have increased, except for those documented as homeless or migrant. 5% of San Joaquin County's high school students are homeless.



Source: California Departemnt of Education, Four-Year Adjusted Cohort Graduation Rate
*Note: Official methodology change in 2016-2017 school year

People and Society

Human Capital

High School Graduation Rates By Race/Ethnicity
2019

Race or Ethnicity	San Joaquin County Graduation Rate	County Change in Graduation Rate (2017-2019)	California Graduation Rate	2019 Share of County Graduates
African American/ Black	75.0%	6.2%	76.8%	8.8%
American Indian/ Alaska Native	66.7%	- 5.6%	74.8%	1.0%
Asian	90.3%	2.6%	94.0%	10.6%
Filipino	94.8%	1.6%	94.1%	5.3%
Hispanic/Latino	82.5%	2.8%	82.1%	50.2%
Pacific Islander	90.1%	6.6%	84.6%	0.8%
Two or More Races	75.2%	- 3.7%	85.5%	2.6%
White	86.6%	3.7%	88.4%	19.6%
Total	83.7%	2.8%	84.5%	100.0%

Source: California Department of Education, Four-Year Adjusted Cohort Graduation Rates

High School Graduation Rates For Disadvantaged Youth
2019

Disadvantage	San Joaquin County	California
English Learners	74.6%	68.7%
Foster Youth	56.5%	56.0%
Homeless Youth	59.0%	70.0%
Migrant Education	70.5%	81.6%
Students with Disabilities	62.6%	67.7%
Socioeconomically Disadvantaged	80.8%	81.1%
Total	83.7%	84.5%

Source: California Department of Education, Four-Year Adjusted Cohort Graduation Rates

Human Capital

College Readiness

Fulfillment of the a-g course sequence in high school can be used as a measure of college readiness. These courses are the minimum entry requirements for the University of California (UC)/California State University (CSU) system. Some high schools require students to complete the a-g sequence in order to graduate, some do not require completion for graduation, and others are not able to offer the full sequence.

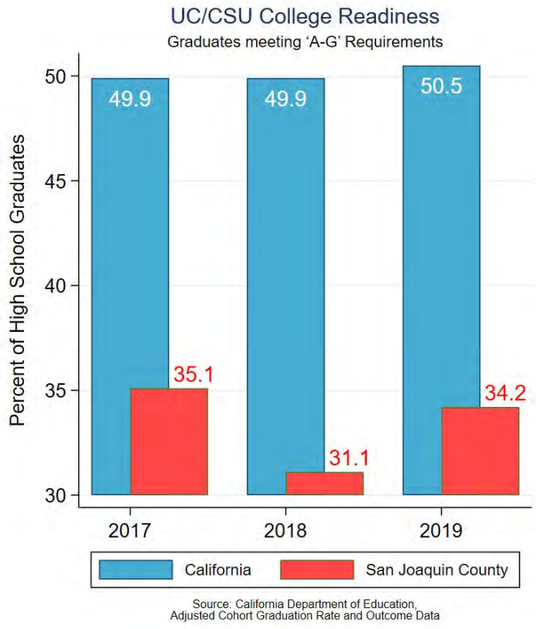
Although college readiness has been on the rise over the past decade, only 34.2% of San Joaquin County students met these requirements in the class of 2019, compared to 50.5% of California students. College readiness continues to increase both state and countywide, but the gap remains consistent and significant. To improve its position in the knowledge economy, San Joaquin County can make the support for the transition from high school to college more robust. Some colleges, including the large UC system, are moving away from the SAT and standardized testing. Other necessary aspects of college readiness still include the a-g sequence, attendance, as well as support and awareness of the college application process and financial aid preparation.

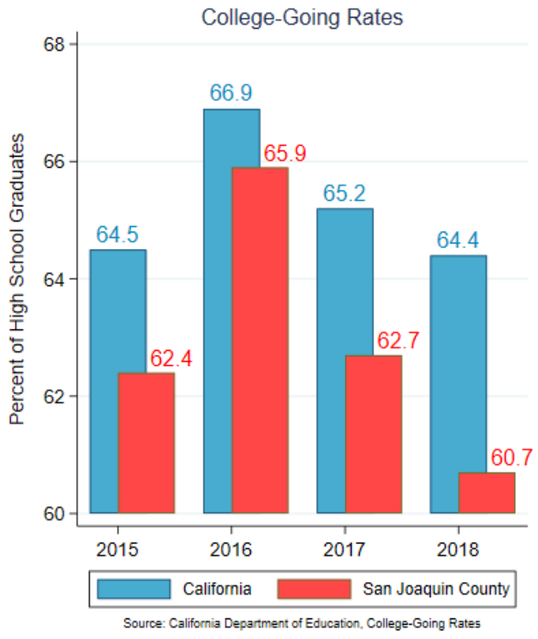
College Going

In the San Joaquin County class of 2018, 60.7% of students enrolled in postsecondary education. Of the students enrolled in college, 35.2% attended a 2 or 4 year college, while 64.8% attended a California community college. 23.0% of college-goers attended a school in the UC or CSU system. Compared to the state, a higher proportion of college-going San Joaquin County students enrolled in community colleges as opposed to 2 and 4 year colleges. A higher proportion also enrolled in-state. Further breakdowns are included in the table below.

Educational Attainment

The distribution of educational attainment of San Joaquin County residents has not changed significantly over the past decade. Half of residents have a high school degree or less, a ratio that has not changed since 2005. This demonstrates a significant skills gap and barrier to economic integration between San Joaquin County and its neighboring regions such as the Bay Area and Greater Sacramento, where educational attainment of residents is higher. The map on the next page illustrates that gap. It reports an estimate of the population's educational attainment in each county as well as within the county.





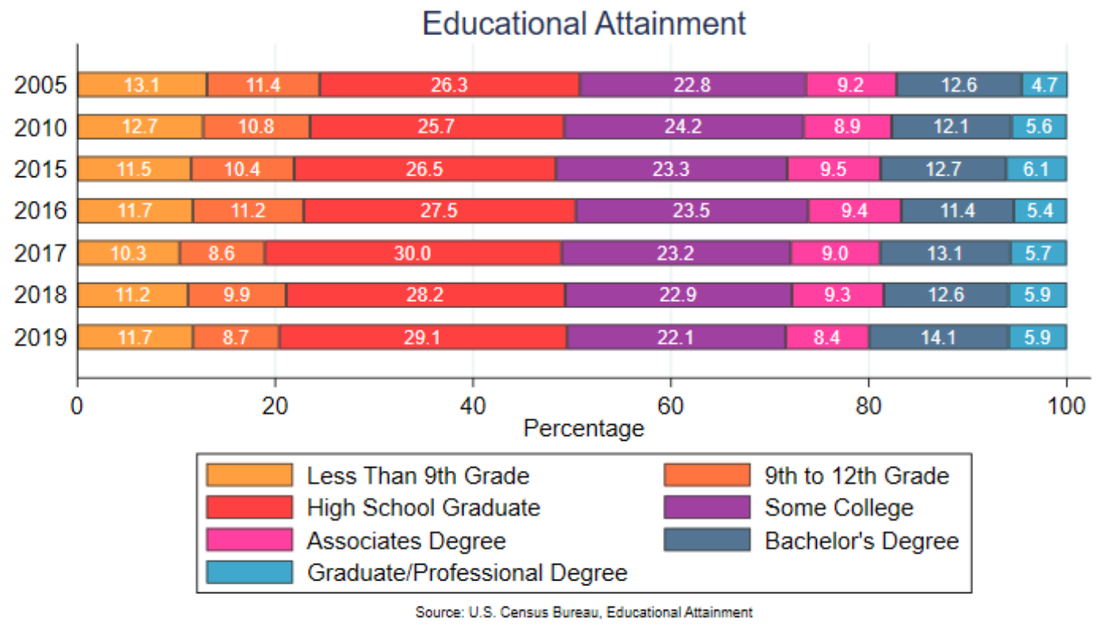
People and Society

Human Capital

College-Going Rate By Institution Type 2018

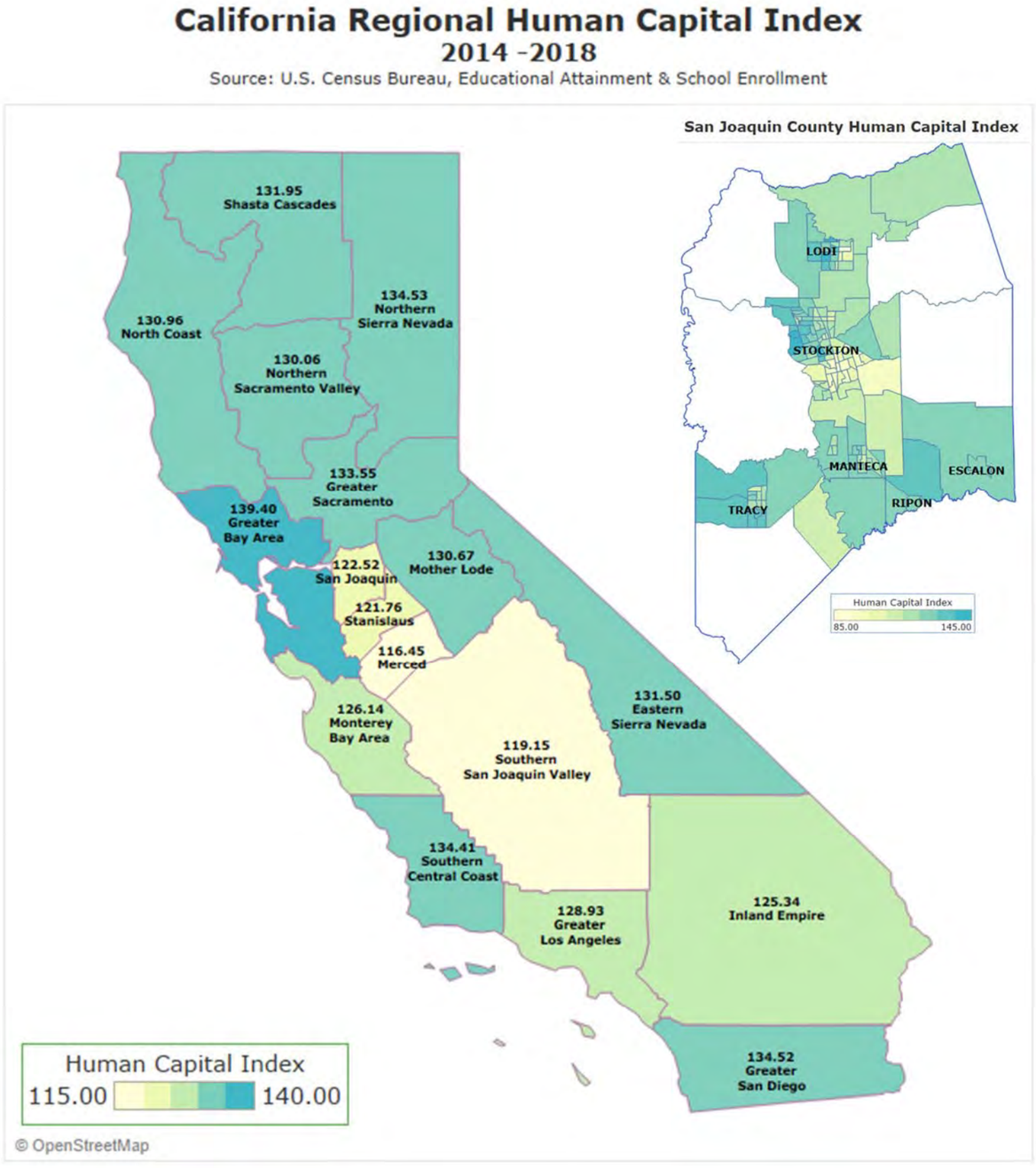
	California Community College	California State Universities	California Private College	Out-of-State
San Joaquin County	64.8%	23.0%	6.6%	5.6%
California	55.1%	29.7%	4.9%	10.2%

Source: California Department of Education, College-Going Rate for California High School Students by Postsecondary Institution Type



Source: U.S. Census Bureau, Educational Attainment

Human Capital



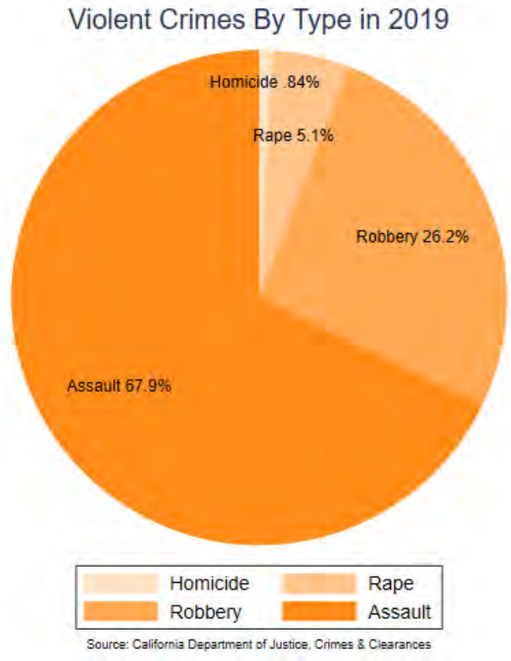
Safety

Why is this important?

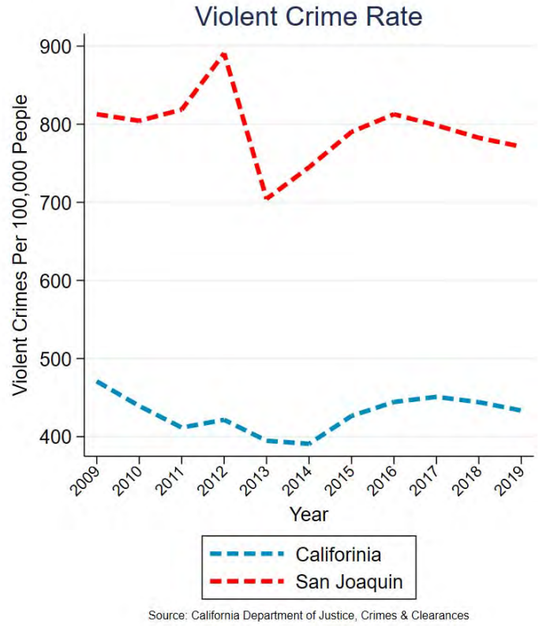
Safety is of high public concern, and a sense of safety is important for a community's physical and psychological well-being as well as its economic development. Maintaining levels of safety encourages migration, business, and recreation and is strongly correlated to income. Measures of safety can include number of accidental injuries, number of police officers, and one of the most basic indicators, crime rates.

Crime

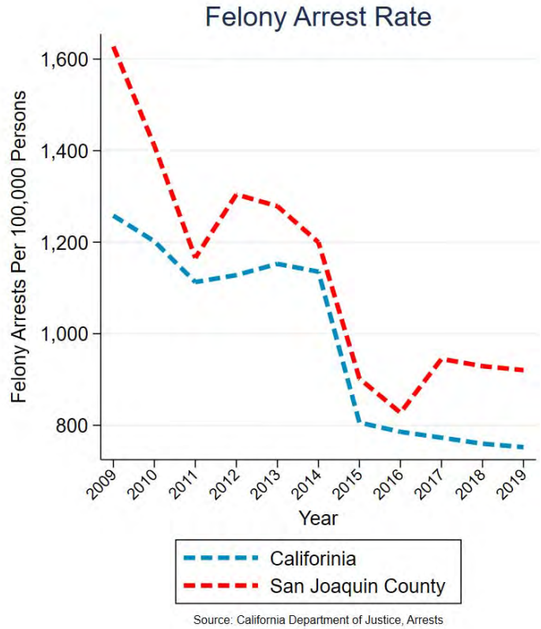
The violent crime rate in San Joaquin County remains significantly higher than those of neighboring counties and the state. The data displayed below is from the FBI's Uniform Crime Reporting (UCR) Program, covering four offenses: murder and nonnegligent manslaughter, rape, robbery, and aggravated assault. After a significant decrease between 2012 and 2013, the San Joaquin County violent crime rate has slowly increased to 2010 levels, maintaining a large gap with the overall California rate. In 2018, the county had a violent crime rate of 790.5 per 100,000 residents, compared to 447.1 in the state. Seen in the figure on the top right of the opposite page, assaults make up the majority of these violent crimes, followed by robbery.



Source: California Department of Justice, Crimes & Clearances



Source: California Department of Justice, Crimes & Clearances



Source: California Department of Justice, Arrests

Social Capital

Why is this important?

Interrelated with a region's human capital is its social capital, which refers to the institutions, networks, and norms that facilitate social interaction, cooperation, and productivity. Although measures of social capital have evolved over time, analyses can consider level of access to information, resources, and influence, as well as participation in community based organizations, private institutions, and politics. Increasing a community's social capital can have far ranging benefits for social cohesion, safety, human capital, and economic health.

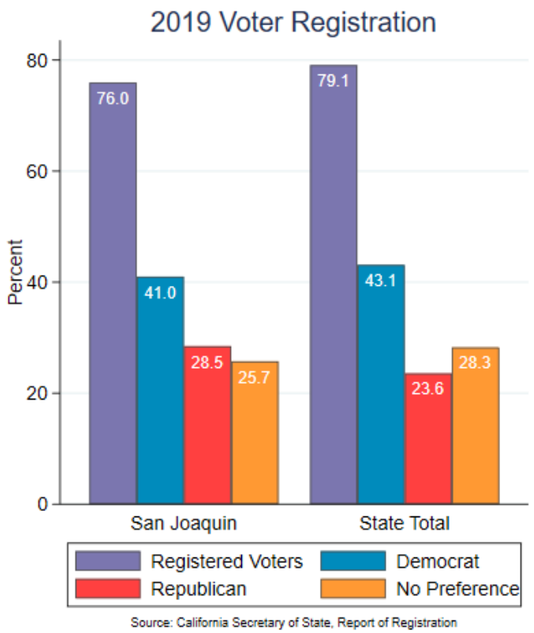
Institutional Health

Voter participation is an indicator of civic engagement that reflects community members' sense of political efficacy. The figure below shows the percent of registered voters in San Joaquin County and the distribution of party preference compared to the state. Voter registration in the county is at 76.0% of those eligible, approximately 3.1% lower than that of the state.

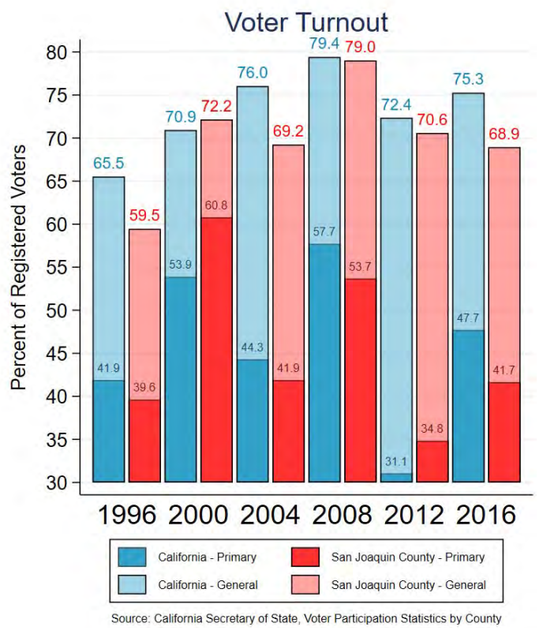
Voter turnout varies depending on the type of election but is consistently higher in general elections than in primaries. The turnout during presidential election years is displayed in the graph below as the percentage of registered voters who cast a vote. Turnout noticeably decreased in primaries where a presidential incumbent was up for re-election. San Joaquin County turnout generally lags that of the state, but in both the 2000 primary and general election it recorded higher turnout and in the 2012 primary it exceeded state voter turnout.

Community Health

Social capital can be measured by the cooperative activities residents engage with in their communities, such as the establishment and membership of nonprofit or religious organizations. The figure to the right shows the number of membership associations per 100,000 persons. San Joaquin County has relatively low densities of and membership organizations ranking 48th lowest among the 58 counties statewide. Its value is lower than all neighboring counties and similar to most other counties in the San Joaquin Valley. The county's level of social associations is also similar to the Inland Empire region of the state..



Source: California Secretary of State, Report of Registration



Source: California Secretary of State, Voter Participation Statistics by County

People and Society

Social Capital

Housing

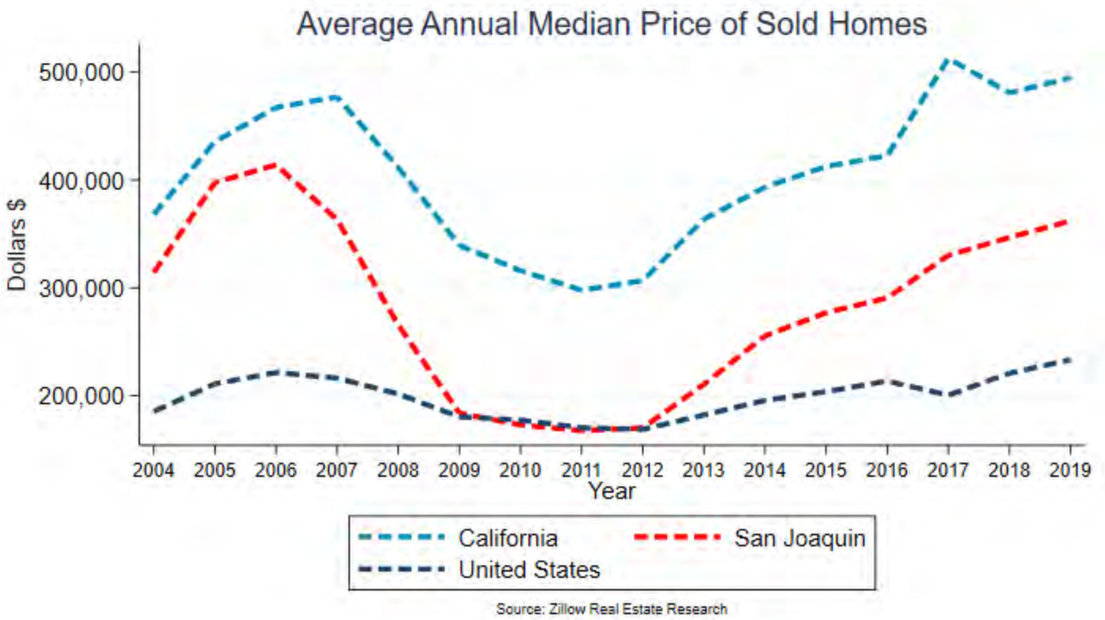
The average annual median price of homes sold is shown below for the United States, the State of California, and San Joaquin County. Overtime, California has seen higher median home prices than the US and San Joaquin County. California and San Joaquin County follow a similar trend and were more responsive to the housing market crash. In San Joaquin County, housing prices reached a peak in 2006 and began to decline in 2007, until 2012. Housing prices and therefore their values were reduced by half from 2006 to 2012 and have not recovered to pre-recession levels. On the other hand , California and the US also saw prices drop but have recovered from the recession.

The table to the right shows housing affordability for first time buyers, in San Joaquin County and for the State of California, from 2016 to 2019. This measure, constructed by the California Association of Realtors, accounts for the median home price, down payment, interest rate, monthly payments (including insurance and taxes) and income. While San Joaquin housing was less affordable for first time buyer in 2016 it has increased to 2019. This is moving in the opposite direction to the rest of the state which has seen declining housing affordability for first time buyers.

Housing Affordability Index - First Time Buyers

	2016	2017	2018	2019
San Joaquin County	46.3%	45.4%	56.5%	61.0%
California	50.8%	48.1%	46.5%	48.3%

Source: California Association of Realtors, First-time Buyer Housing Affordability Index



Source: Zillow Real Estate Research

As a Place

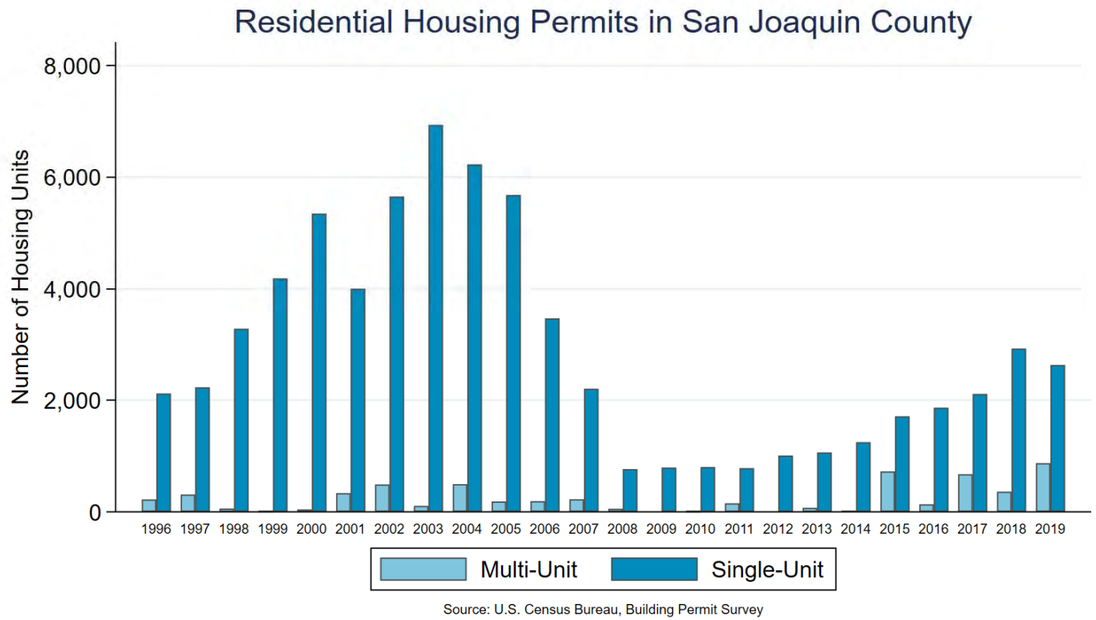
Housing

The housing market is an important economic indicator that reflects consumer and producer confidence in the future of the economy. One reason that is used to measure overall economic condition is because the housing market is, generally, very responsive to the economy and one of the first sectors to rise or fall with changing economic conditions. Home ownership may come with a large amount of debt but it also acts as an asset that individuals use as collateral to access liquidity and/or investments. Changes in the prices of homes are caused by shifts in the supply and demand for housing but also have an important role in financial markets. The supply of housing has an effect on rental prices and limited affordability of homes can result in people living outside the area, commuting longer, more traffic, and less free time.

In the graph below, the number of residential housing permits for single and multi-unit structures are shown over time. This measure shows trends in the number of permits, which are indicators of future housing construction. There is a clear drop off in the number of permits with the housing market crash up to a low in 2008. While the number of housing permits rose steadily between 2012 and 2018, single-unit permits have fallen in 2019/

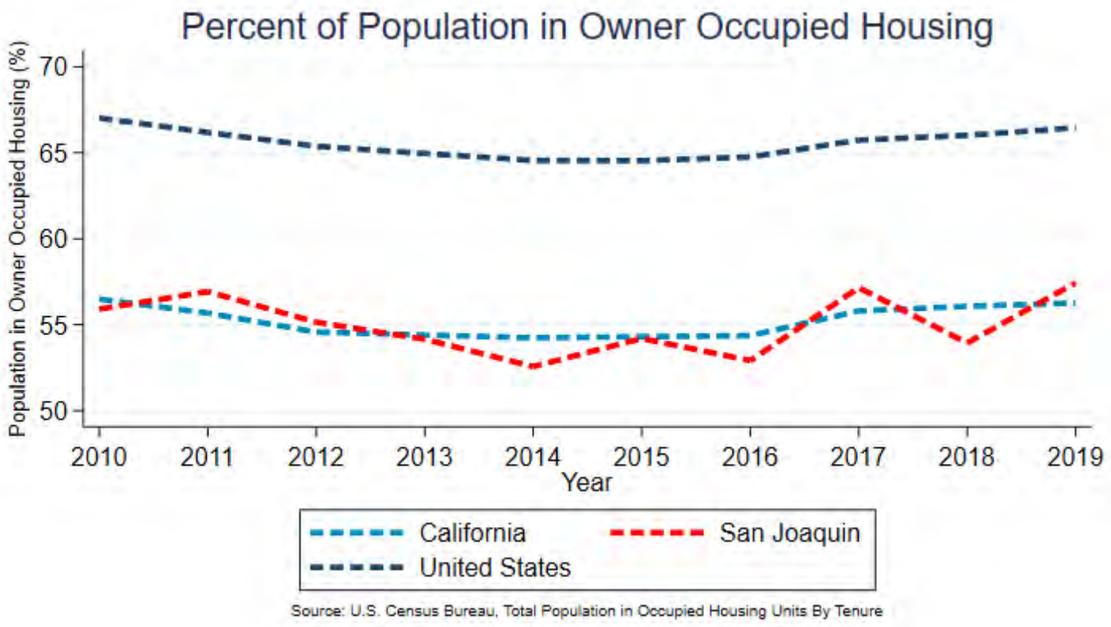
The pie graphs, on the bottom of the next page, show the percent of housing permits issued by single and multi-unit structures in 2019 for San Joaquin County and the State of California. As a percentage of all housing permits, San Joaquin County is building more single-unit structures than the rest of the state. While the State of California as a whole is almost evenly split between multi and single unit housing permits, in San Joaquin County 89% of issued housing permits were for single-unit structures. However, the fraction of multi-unit structures has gradually increased since the recession.

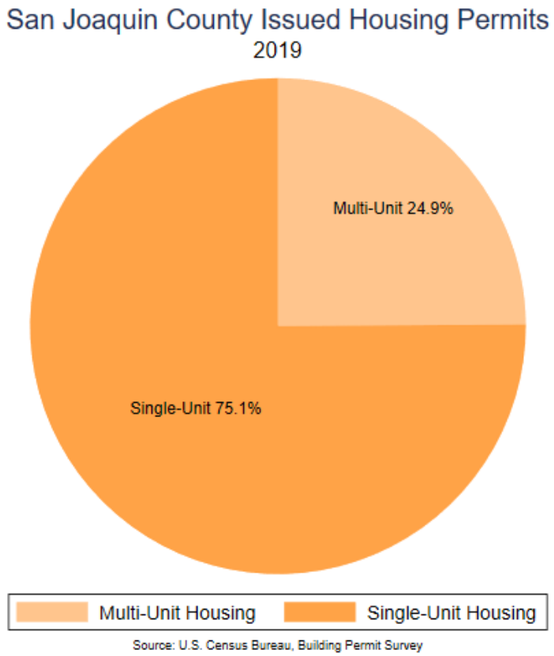
The figure on the top of the next page shows county, state and national trends over the past decade in home ownership. While San Joaquin county is comparable to the State of California , both are much lower than the percent of owner occupied housing for the entire United States. This is likely a result of California's relatively high housing costs and San Joaquin county's increased integration with the Bay Area.

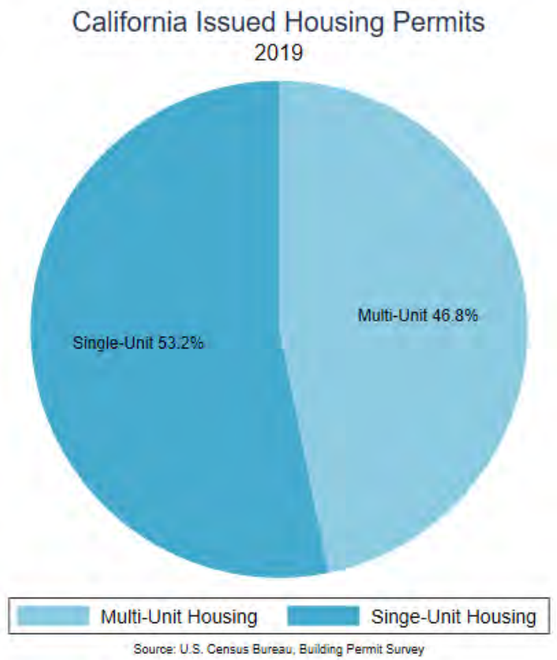


Source: U.S. Census Bureau, Building Permit Survey

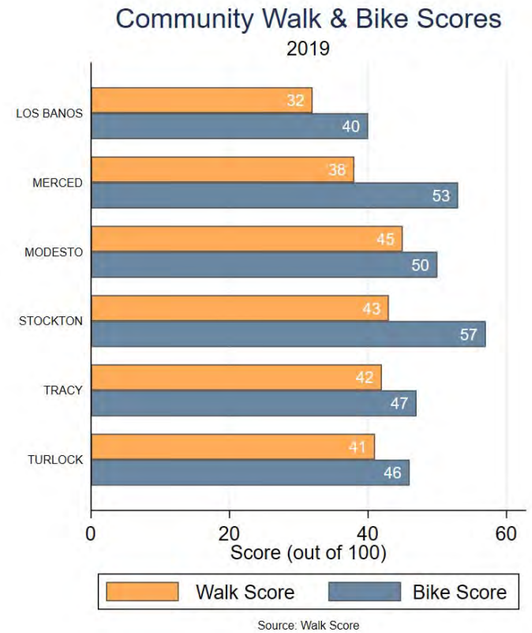
Housing







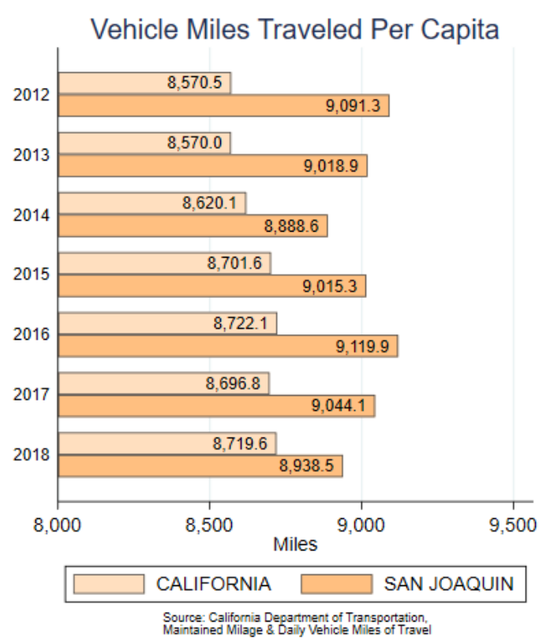
Transportation

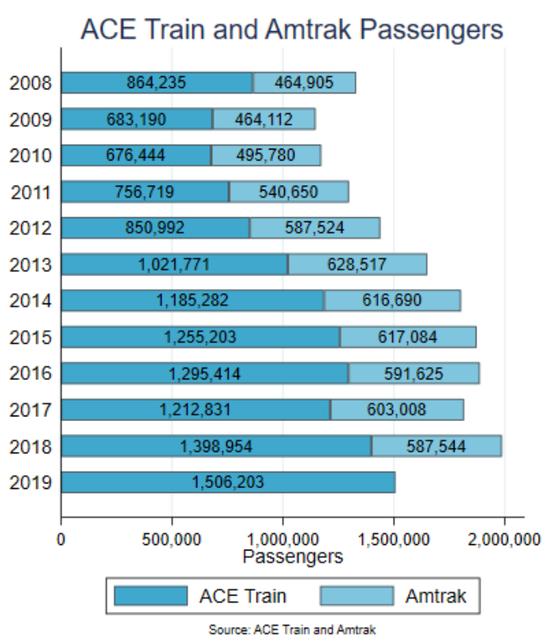


Transportation plays an important function in society. It not only allows for ease of travel but also supports business activities as well as enabling people to work and live in different areas. Walk and bike score measures the ease in which a member of the community is able to walk and bike. In the county, scores are reported for Stockton and Tracy. They have walk scores of 43 and 42, which are categorized as “car-dependent”. Stockton has a bike scores of 57 which is considered “Bikeable - some bike infrastructure”. Tracy has a bike score of 47 and is classified as “Somewhat bikeable – minimum infrastructure”.

San Joaquin County residents traveled more than 200 miles in a vehicle on average compared to the state as a whole. It is notable that the average miles traveled has been declining since 2016, resulting in narrowing of the divergence from the state.

ACE train and Amtrak ridership number are also detailed below, both of which have been increasing over time. Growth in the ACE train with its commuter focus is particularly notable. A combination of higher wages in the Bay Area and lower housing costs in San Joaquin County are probably important for this increase, which has led to a 120% increase in ACE train ridership between 2009 and 2019.

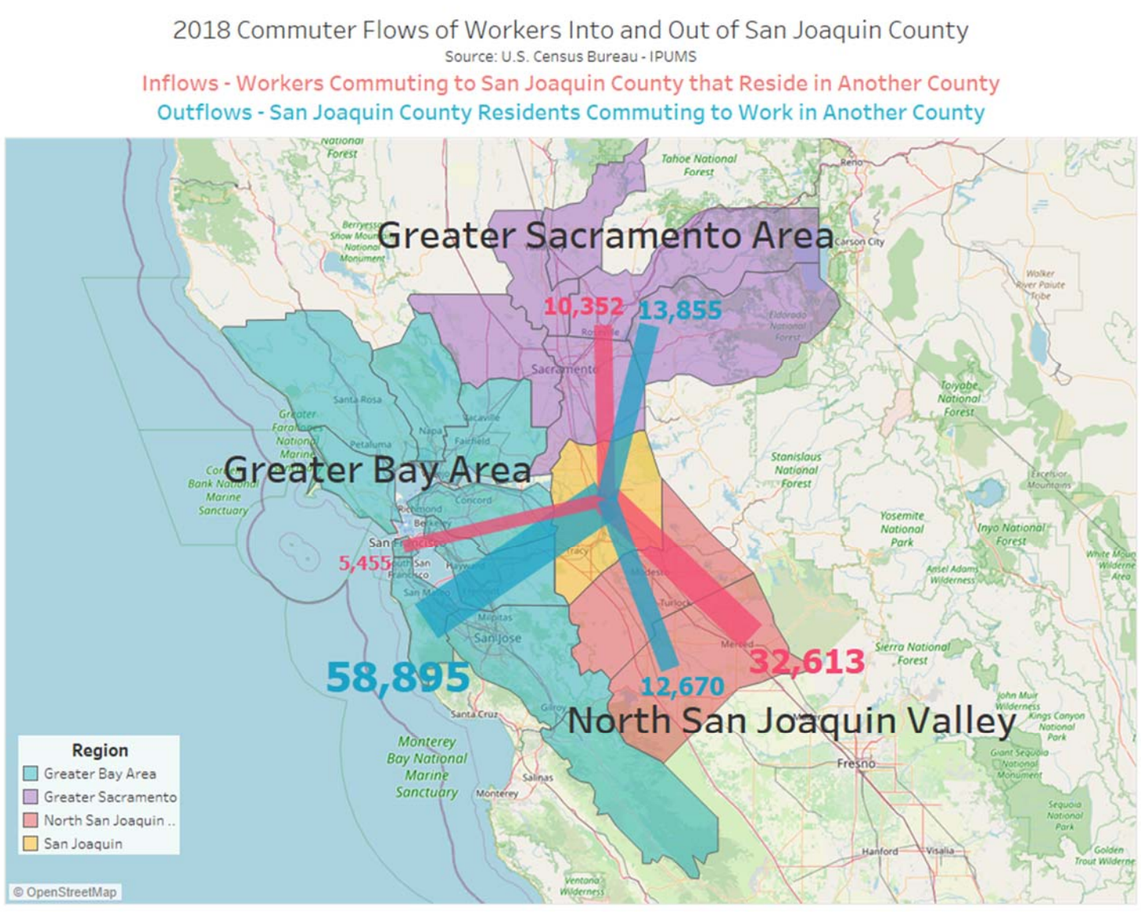




Transportation

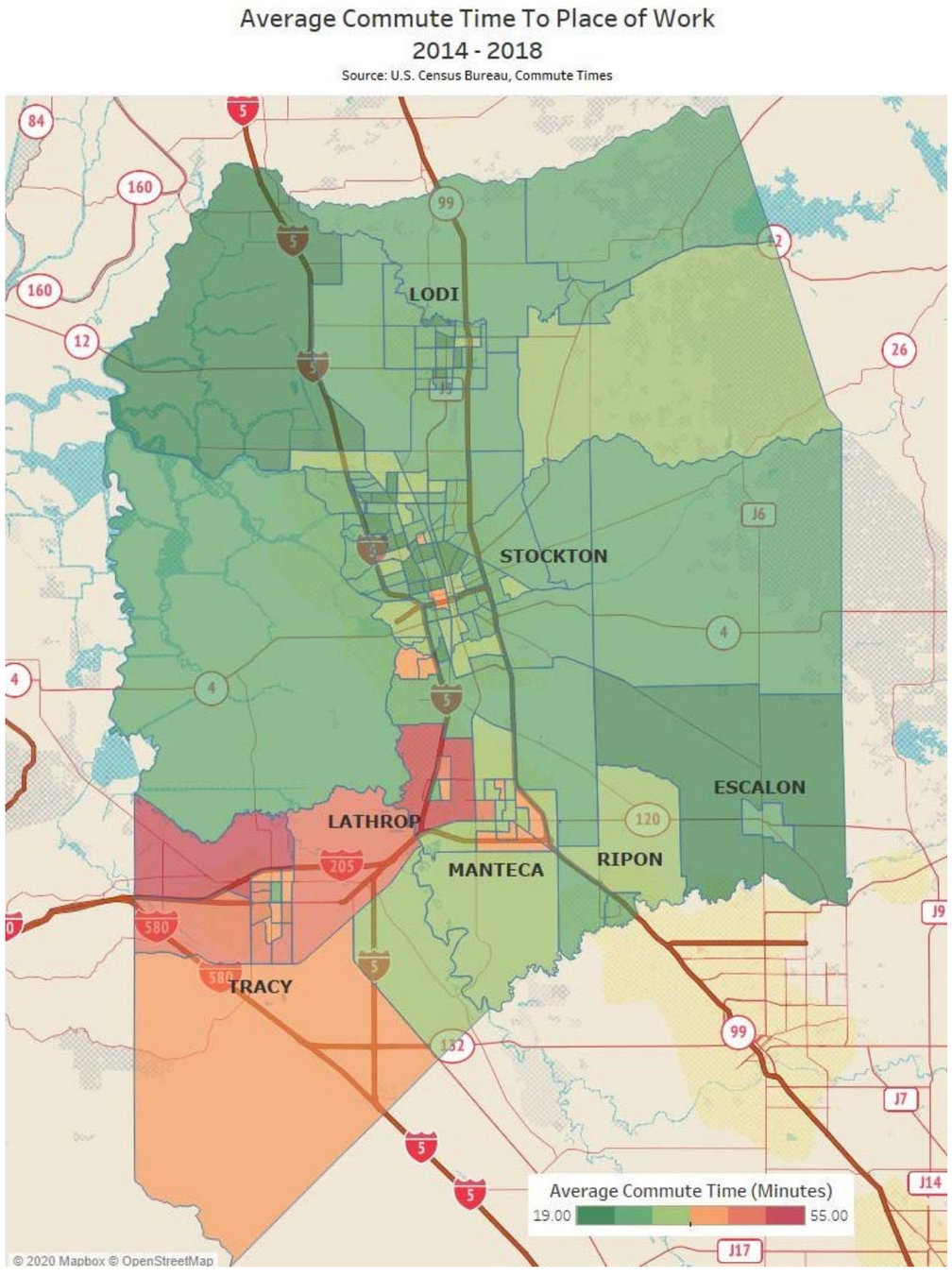
The Map below shows the commuter flows of workers into and out of San Joaquin County. It shows that in 2018 there were an estimated 58,895 workers who live in San Joaquin County and commute to the Greater Bay Area for work. Those out-commuters are over ten times the in-commuters from the Greater Bay Area. These Bay Area out-commuters have been steadily increasing with a six percent increase in just the three-year period from 2015 to 2018. In contrast, the estimated commuter flows to and from the Greater Sacramento Area are much more balanced with 10,352 in-commuters and 13,855 out-commuters. Another area of growing commuters is with other counties in the North San Joaquin Valley. This commute had more than 2.5 times the in-commuters than out-commuters .

On the next page the heat map shows commute times for each Census tracts within the county. Average commute times range from 19.0 to 54.5 minutes. The area in and around Tracy, Lathrop and Manteca have the longest commute times in the county. More detailed analysis shows that these commuters from the south-west of the county tend to be Bay Area commuters, where congestion and distances lead to some of the greatest prevalence of super-commuters (workers with commutes of 90 minutes or more each way) in the nation.



As a Place

Transportation

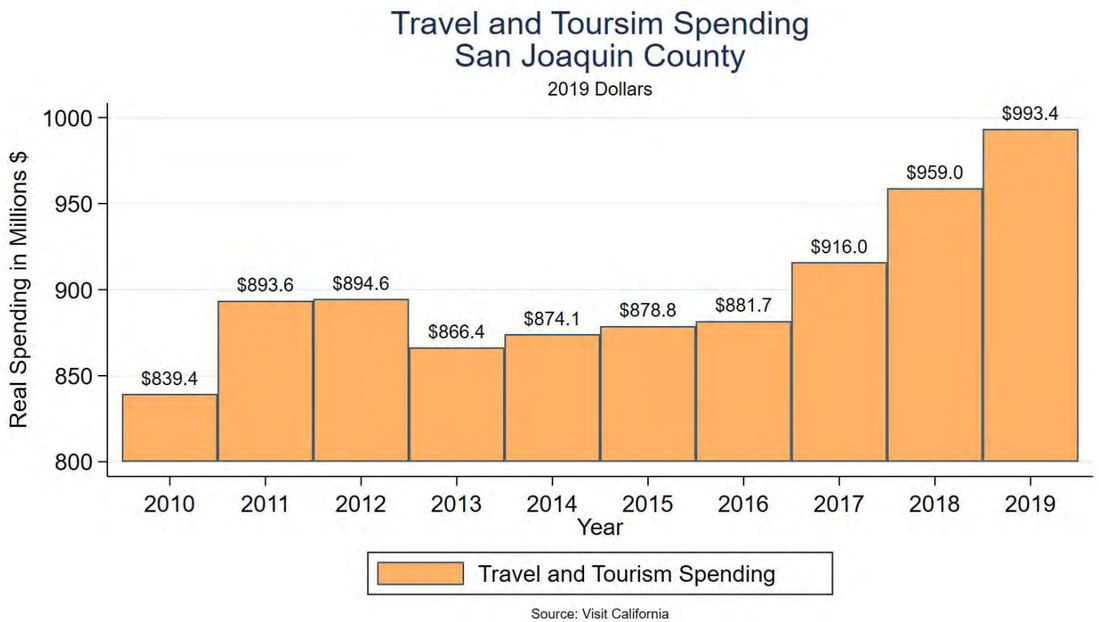


Tourism

Tourism provides outside income to the local economy and is an important contribution to local businesses. The amount of tourism into an area indicates the attractiveness of an area as well as the amenities and attractions it has to offer. It can also reflect the size of the regions population as well.

Travel and tourism spending in San Joaquin County was higher than the surrounding counties Merced and Stanislaus, as seen in the graph to the right. In 2019 San Joaquin county received roughly three times more tourism revenues than Merced county and about one and a half time those of Stanislaus county .

In the graph below, travel and tourism spending is shown for San Joaquin County, in real dollars, in years 2010 to 2018. According to Visit California travel and tourism spending has grown consistently since 2013. Growth since 2017 has been particular strong with annual spending increasing from $882 million in 2016 to $993 million in 2019. In that period annual growth has averaged about 4%. While COVID-19 will undoubtedly severely impact these revenues, this trend in combination with significant new tourism infrastructure like the Great Wolf Lodge in Manteca suggest that prospects for recovery are good.



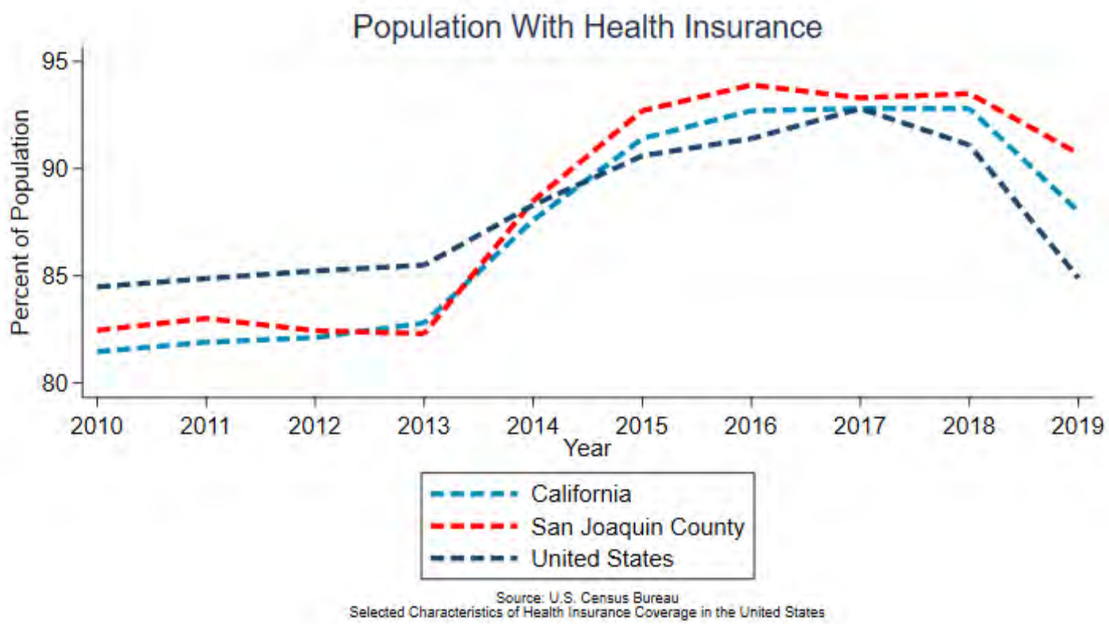
Health

The health of individuals that make up our society has important implications for our culture and economy. Poor health is strongly correlated with socioeconomic status in this country and poor health can have a major impact on productivity, life expectancy and happiness. Universal healthcare is provided by 112 of the world's 195 countries (57.4%) and while they have different systems they cover all citizens in their population. In the United State there the a combination of public and private insurance options available. Some of the government provided options include Medicare, Medicaid, Veterans Benefits, and the Affordable Care Act (ACA).

While there are different options available the percent of the population that has health insurance, from any source, is presented in the figure below. It shows that in 2014 the percent of the population that has health insurance increased substantially as the ACA was fully implemented. Prior to the ACA, San Joaquin County and California had lower coverage rates but they both exceeded the national figure in 2015. Despite these gains there are signs that the share of the population with health insurance coverage is declining with 2019 decreases, nationally, statewide and in the county.

The United States as a whole spends more on health coverage than any other country with an average expenditure of $10,586 in 2018. In comparison average health expenditure for OECD countries was $3,994 in 2018. Medical expenses are the leading cause of bankruptcy in the United Sates and in 2019 the American Journal of Public Health found that they account for 66.5% of all personal bankruptcies.

Vaccinations are an important component of community health and help protect individuals and the population as a whole from illness. The graph on the bottom of the next page shows the percent of kindergartners that are up to date with their vaccinations. San Joaquin County has a higher percent of kindergarteners that are up to date with their vaccines compared to the rest of the State. The county's rate has been between 95 and 97 percent over the past decade. In comparison, the statewide percentage was significantly lower and declining until 2015 when the state eliminated exemptions based on personal or religious beliefs. Several laws since 2015 have further supported inoculations but the statewide rate remains below that of the county.

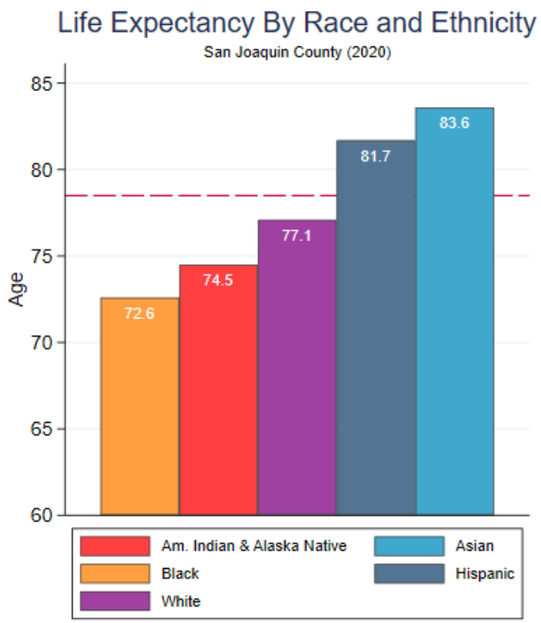


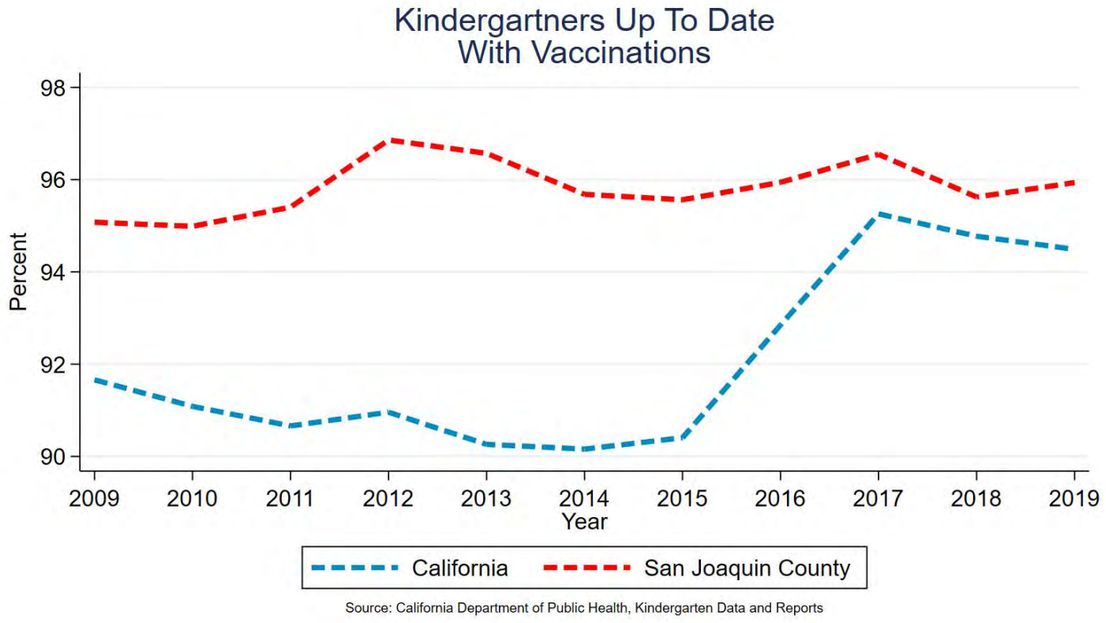
Health

Individual and community heath is import for a thriving economy and society. Socioeconomic status, access to health care, environmental factors, lifestyle choices, genetics, and other factors contribute to health outcomes.

In the figure to the right county life expectancy for 2020 is detailed by race. The dashed red line at 78.5 years represents the average life expectancy for all races. According the County Health Rankings and Roadmap data Asian and Hispanics are the groups with the highest life expectancy. The data shows that there are large differences across group's life expectancy, with Blacks having the shortest life expectancy living 72.6 years. In comparison those of Asian decent are expected to live more than 10 years longer than blacks in the county.

Age-Adjusted mortality rates in 2020 are detailed in the figure on the bottom of the opposite page. These rates show comparative data for the county and California as a whole. In addition where established the figure also includes the Healthy People National Objective for further context. These figures are calculated to control for the effects of different age population distributions.





As a Place

Health

Nearly all of the reported categories in San Joaquin County have higher age-adjusted rates than the state as a whole. The causes are similar in order for the county and the state, but the county's age adjusted stroke mortality is the fourth highest in terms of incidence but it is fifth highest statewide.

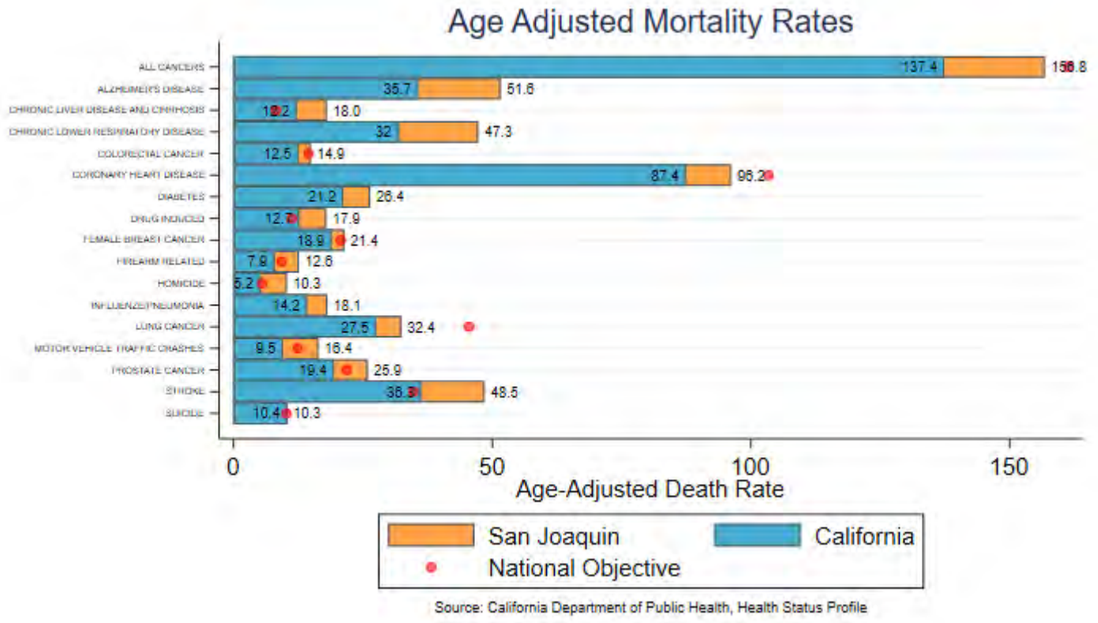
While the county is not outperforming the State, in general, it is performing better than the Health People National Objective for lung cancer, coronary heart disease, and all cancers.

There are a high number of accident related deaths in the county that include unintentional injuries, drug induced, firearm related, and traffic accidents. Also of note is that the rate of stroke, Alzheimer's Disease, and chronic lower respiratory disease are much higher than the rest of the state.

On the top left of the next page health behaviors comparisons are detailed for California and San Joaquin County. County residents make less healthy decisions, on average, compared to the rest of the state. The most frequent unhealthy behaviors are the same as those for the state as a whole: 1) insufficient sleep, 2) alcohol impaired driving, 3) excessive drinking and 4) food insecurity.

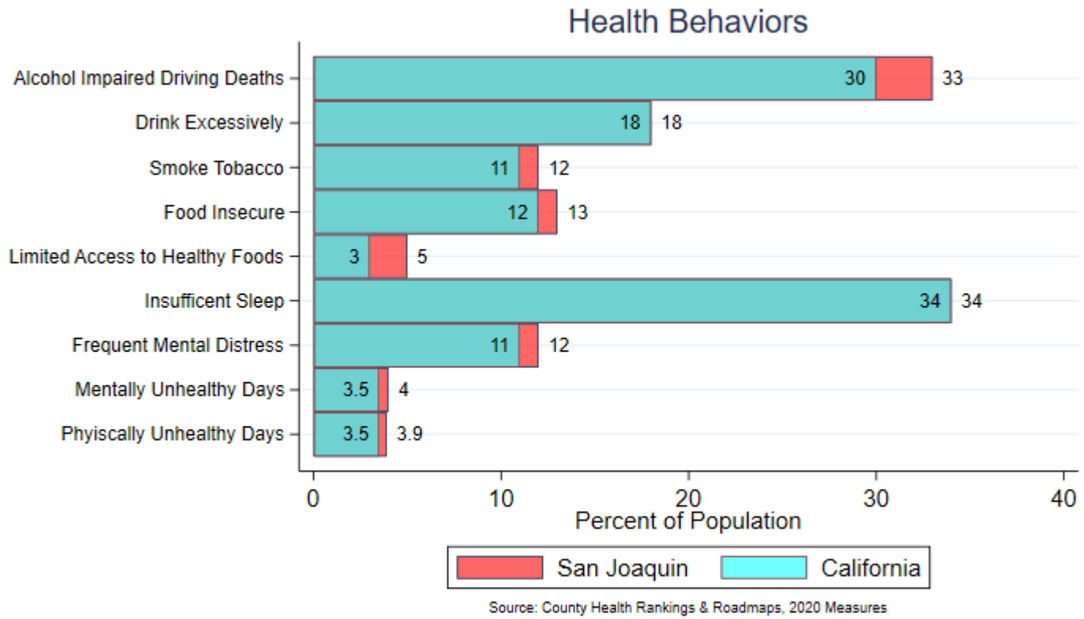
Physical health comparisons are reported in the figure on the bottom left of the next page. It also suggests the county's health is lower than the state as a whole. While it is similar to state rates in terms of diabetes and persons in frequent physical distress. In other areas it preforms much worse than the state. For example the percentage of the population reporting physical inactivity is 47% higher than those for the state. Similarly, those reporting no access to exercise is double the rate for the state overall.

Another area where the county's health lags is in obesity where rates are 30% higher than the state as a whole. The map on the page after the next reports obesity rates by county across California. The map shows the lowest obesity rates are around urban coastal areas of the state with most of the counties in the Bay Area recording rates below 20%. Most counties in the San Joaquin Valley have high obesity rates with nearly all reporting 25% or higher percentages of their populations as being obese.

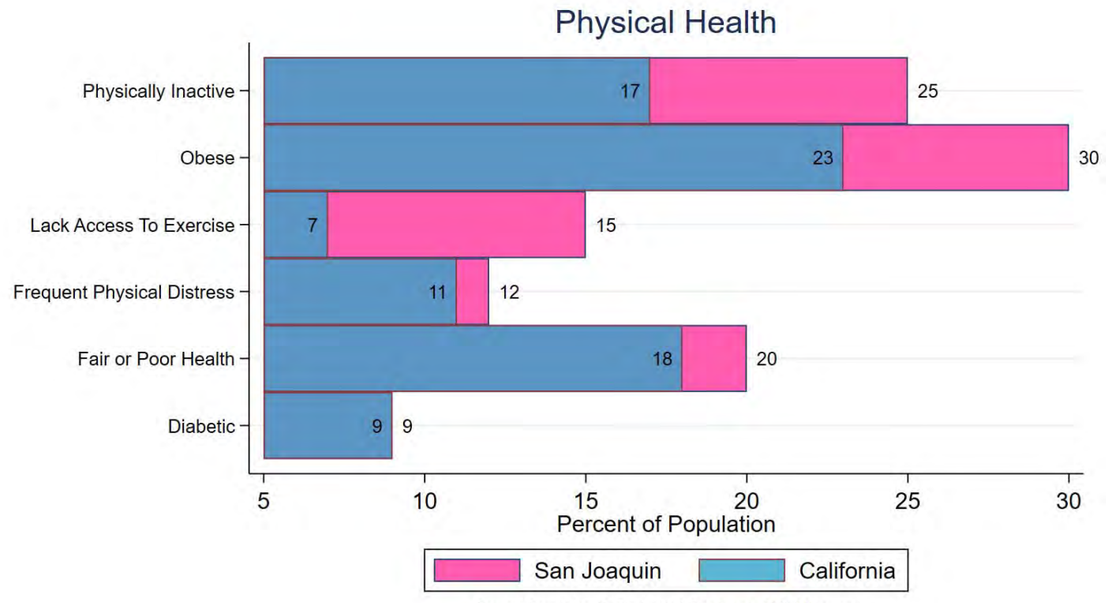


As a Place

Health



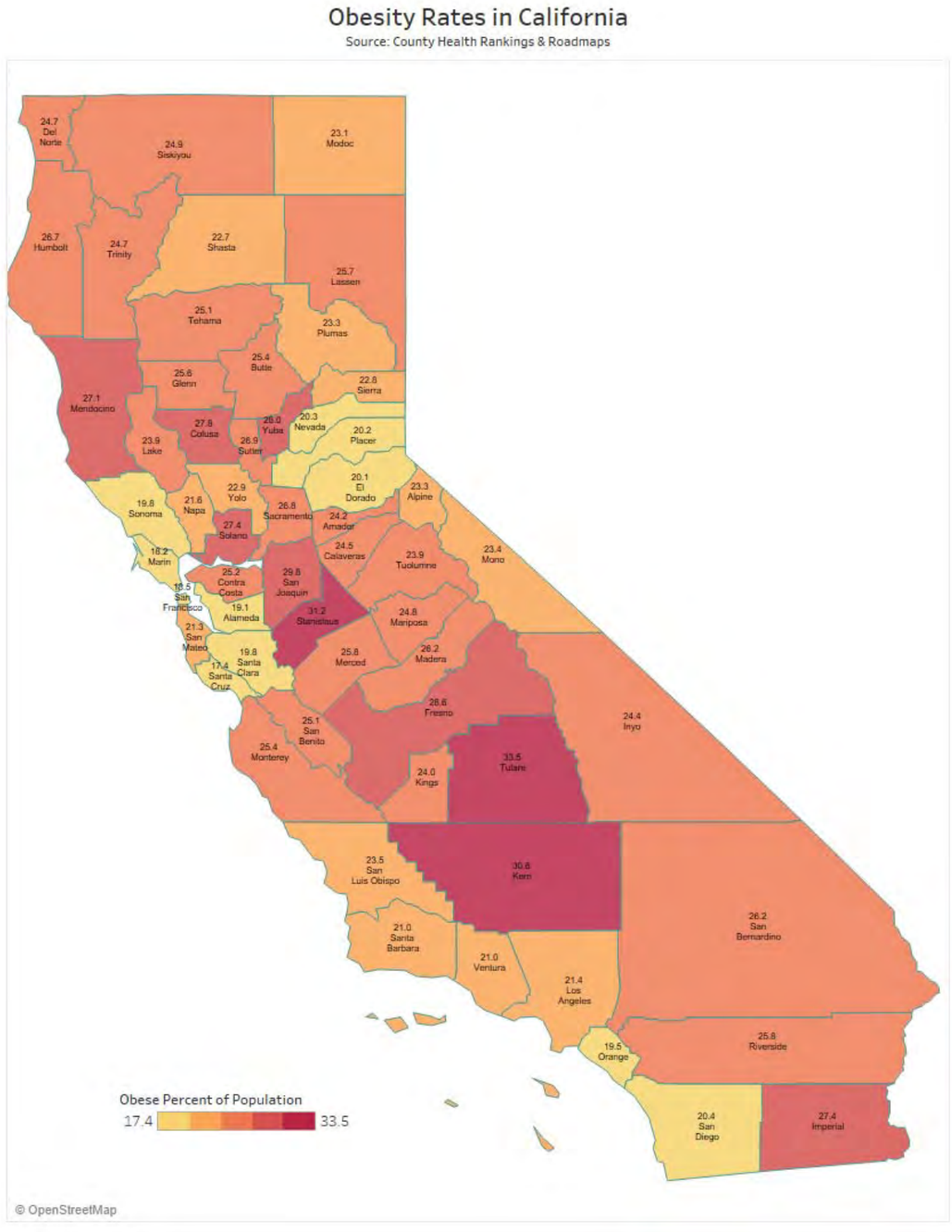
Source: County Health Rankings & Roadmaps, 2020 Measures



Source: County Health Rankings & Roadmaps, 2020 Measures

As a Place

Health



Economy

EMPLOYMENT

Total Payroll Jobs in San Joaquin County

U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages - All Employees in Total Covered Total, all industries for All establishment sizes

Annual Employment Change By Industry

State of California Employment Development Department (EDD), Industry Employment – Official Estimates

Ten Year Employment Change By Industry

State of California Employment Development Department (EDD), Industry Employment – Official Estimates

San Joaquin County Employment By Industry – Table

State of California Employment Development Department (EDD), Industry Employment – Official Estimates

Annual Employment Growth Rate

U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages - All Employees in Total Covered Total, all industries for All establishment sizes

Comparative Employment Growth Rate

U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages - All Employees in Total Covered Total, all industries for All establishment sizes

Unemployment Rate

State of California Employment Development Department (EDD)- Labor Market Information Division, Local Area Unemployment Statistics (LAUS)

Labor Force and Employment

State of California Employment Development Department (EDD)- Labor Market Information Division, Local Area Unemployment Statistics (LAUS)

Metropolitan Statistical Areas with Largest Transportation & Warehousing Employment Share—Table

U.S. Bureau of Labor Statistics, Quarterly Census Employment and Wages (QCEW) , All MSAs, One Industry (NAICS 48-49) Transportation & Warehousing

Employment and Annual Wages By Occupation in San Joaquin County – Table

U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES)

EMPLOYMENT WITHIN SAN JOAQUIN COUNTY

Employment Growth By County Subdivision– Table

U.S. Census Bureau, Longitudinal Employer Household Dynamics (LEHD)

Appendix

Employment By County Subdivision – Map

U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD)

INCOME

Real Income Per Capita

Bureau of Economic Analysis (BEA), Personal Income and Employment by County and Metropolitan Area, Personal Income, Population, Per Capita Personal Income (CAINC1)

Bureau of Economic Analysis (BEA), Personal Income and Employment by State, Personal Income, Population, Per Capita Personal Income, Disposable Personal Income, and Per Capita Disposal Personal Income (SAINC1/SAINC51)

Real Median Household Income

U.S. Census Bureau, American Community Survey (ACS) 1-Year Estimates, Median Income In The Past 12 Months (S1903)

Income Inequality Ratio

U.S. Census Bureau, American Community Survey (ACS) 1 -Year Estimates, Mean Household Income of Quintiles (B19081)

Poverty Status

U.S. Census Bureau, Poverty Status In The Past 12 Months

Official and Adjusted Poverty Rates

Adjusted – Public Policy Institute of California, California Poverty Measure (CPM)

Official – U.S. Census Bureau, American Community Survey (ACS) 1 -Year Estimates, Poverty Status In The Past 12 Months (S1701)

Burdened Households

U.S. Census Bureau, American Community Survey (ACS) 1-Year Estimates, Burdened Households (DP04)

EARNINGS & INCOME WITHIN SAN JOAQUIN COUNTY

Earnings By County Subdivision

U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD)

Age Of Unemployed By County Subdivision

U.S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD))

Median and Mean Household Income By County Subdivision

U.S. Census Bureau, American Community Survey (ACS) 5-Year Estimates, Income In The Past 12 Months—Households (S1901)

Household Income By County Subdivision

U.S. Census Bureau, American Community Survey (ACS) 5-Year Estimates, Income In The Past 12 Months—Households (S1901)

OUTPUT

Real GDP in San Joaquin County

Bureau of Economic Analysis (BEA), Real GDP in Chained Dollars

Output By Industry in San Joaquin County – Table

Bureau of Economic Analysis (BEA), Gross Output By Industry

AGRICULTURE

Real Agriculture Production in San Joaquin County

San Joaquin County, Agricultural Commissioner, Annual Report of Agricultural Production in San Joaquin County

San Joaquin County Top 10 Commodities

San Joaquin County, Agricultural Commissioner, Annual Report of Agricultural Production in San Joaquin County

Agriculture Net Income in San Joaquin County

Bureau of Economic Analysis, Local Area Annual Series, Farm Income and Expenses (CA45)

Weekly Farm Wages

Bureau of Labor Statistics, Quarterly Census Employment and Wages (QCEW) Major Industry Level

Total Farm Wages

Bureau of Labor Statistics, Quarterly Census Employment and Wages (QCEW) Major Industry Level

COMMERCIAL REAL ESTATE

Industrial Real Estate Vacancy and Rent

Colliers International, Stockton/Central Valley Industrial Market Research Report

Office Building Vacancy and Rent

Colliers International

INNOVATION

Utility Patents Per Employee

U.S. Patent and Trademark Office, New Patent Assignments

Appendix

Establishment Churn

U.S. Census Bureau, Business Dynamic Statistics (BDS), BDS Data Tables, One-Way Tables, County

Start-Up Intensity

U.S. Census Bureau, Business Dynamic Statistics (BDS), BDS Data Tables, One-Way Tables, County & State

People and Society

DEMOGRAPHICS

Population in San Joaquin County

California Department of Finance, E-6. Population Estimates and Components of Change by County

Population in San Joaquin County — Table

U.S. Census Bureau, Annual Estimates for the Resident Population for Incorporated Places (2019)

Population by County Subdivision – Map

U.S. Census Bureau, American Community Survey (ACS) 5 -Year Estimates, Total Population (B01003)

Population by City – Map

U.S. Census Bureau, Annual Estimates for the Resident Population for Incorporated Places (2019)

Net Migration in San Joaquin County

California Department of Finance, E-6. Population Estimates and Components of Change by County

San Joaquin County Population Forecast

Center for Business and Policy Research (CBPR), Population Forecast (2020 September)

Birth Rates

U.S. Department of Health and Human Services (US DHHS), Center for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Natality public-use data 2007-2018

Average Age of Mother at Time of Birth

U.S. Department of Health and Human Services (US DHHS), Center for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Natality public-use data 2007-2018

HUMAN CAPITAL

Math Proficiency – All Grades

California Department of Education, California Assessment of Student Performance and Progress (CAASPP), Smarter Balanced Assessment Test Results

Appendix

English Proficiency – All Grades

California Department of Education, California Assessment of Student Performance and Progress (CAASPP), Smarter Balanced Assessment Test Results

Math Proficiency – Third Grade

California Department of Education, California Assessment of Student Performance and Progress (CAASPP), Smarter Balanced Assessment Test Results

Math Proficiency – Eleventh Grade

California Department of Education, California Assessment of Student Performance and Progress (CAASPP), Smarter Balanced Assessment Test Results

English Proficiency – Third Grade

California Department of Education, California Assessment of Student Performance and Progress (CAASPP), Smarter Balanced Assessment Test Results

English Proficiency – Eleventh Grade

California Department of Education, California Assessment of Student Performance and Progress (CAASPP), Smarter Balanced Assessment Test Results

High School Graduation Rates

California Department of Education, Four-Year Adjusted Cohort Graduation Rates & Outcomes, Four-Year Adjusted Cohort Graduation Rate

High School Graduation Rates By Race/Ethnicity 2019 – Table

California Department of Education, Four-Year Adjusted Cohort Graduation Rates, Four-Year Adjusted Cohort Outcome

High School Graduation Rates For Disadvantaged Youth 2019 – Table

California Department of Education, Four-Year Adjusted Cohort Graduation Rates, Four-Year Adjusted Cohort Outcome - Socioeconomically Disadvantaged

UC/CSU College Readiness

California Department of Education, Adjusted Cohort Graduation Rate and Outcome Data

College-Going Rates

California Department of Education, College-Going Rates, College-Going Rate for California High School Students

College-Going Rate by Institution Type 2018– Table

California Department of Education, College-Going Rates, College-Going Rate for California High School Students by Postsecondary Institution Type

Educational Attainment

U.S. Census Bureau, 1-Year American Community Survey (ACS), Educational Attainment (S1501)

Appendix

California Regional Human Capitol Index – Map

U.S. Census Bureau, U.S. Census Bureau, 1-Year American Community Survey (ACS), Educational Attainment (S1501)

U. S. Census Bureau, U.S. Census Bureau, 1-Year American Community Survey (ACS), School Enrollment (S1401)

SAFETY

Violent Crimes By Type in 2019

California Department of Justice, Crimes & Clearances

Violent Crime Rate

California Department of Justice, Crimes & Clearances

Felony Arrest Rate

California Department of Justice, Arrests

SOCIAL CAPITAL

2019 Voter Registration

State of California Secretary of State, Report of Registration

Voter Turnout

State of California Secretary of State, Voter Participation Statistics by County

Social Associations –Map

U.S. Census Bureau, County Business Patterns

As a Place

HOUSING

Housing Affordability Index – First Time Buyers

California Association of Realtors, First-time Buyer Housing Affordability Index

Average Annual Median Price Of Sold Homes

Zillow Real Estate Research

Residential Housing Permits in San Joaquin County

U.S. Census Bureau, Building Permit Survey, ASCII files by State, MSA, County or Place

Percent of Owner Occupied Housing

U.S. Census Bureau, American Community Survey 1-Year Estimates, Total Population in Occupied Housing Units By Tenure (B25008)

San Joaquin County Issued Residential Permits

U.S. Census Bureau, Building Permit Survey**,** ASCII files by State, MSA, County or Place

California Issued Residential Permits

U.S. Census Bureau, Building Permit Survey, ASCII files by State, MSA, County or Place

TRANSPORTATION

Community Walk & Bike Scores

Walkscore.com

Vehicle Miles Traveled Per Capita

California Department of Transportation, Maintained Mileage & Daily Vehicle Miles of Travel

ACE Train and Amtrak Passengers

Ace Train— San Joaquin Regional Rail Commission

Amtrak—Rail Passengers Association, Ridership Statistics, Fact Sheet: Amtrak in California

2018 Commuter Flows of Workers Into and Out of San Joaquin County – Map

U. S. Census Bureau, Longitudinal Employer-Household Dynamics (LEHD), Origin-Destination Employment Statistics (LODES)

Average Commute Time To Place of Work – Map

U. S. Census Bureau, American Community Survey 5-Year Estimates, Commuting Characteristics, Commute Times (S0801)

TOURISM

Travel and Tourism Spending (2018)

Visit California, Economic Impact of Travel in California 2010-2019, History of Travel Spending in California

Travel and Tourism Spending San Joaquin County

Visit California, Economic Impact of Travel in California 2010-2019, History of Travel Spending in California

HEALTH

Population With Health Insurance

U.S. Census Bureau, American Community Survey 1-Year Estimates, Selected Characteristics of Health Insurance Cover-

age in the United States (S2701)

Life Expectancy by Race

County Health Rankings and Roadmaps, San Joaquin County

Kindergartners Up To Date With Vaccinations

California Department of Public Health, Immunization Branch, Kindergarten Data and Reports

Age Adjusted Mortality Rates

California Department of Public Health, Health Status Profile

Health Behaviors

County Health Rankings and Roadmaps, San Joaquin County

Physical Health

County Health Rankings and Roadmaps, San Joaquin County

Obesity Rates in California –Map

County Health Rankings and Roadmaps, San Joaquin County

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