



# 2020 Stanislaus County Commuter Study

Report for Stanislaus County Workforce Development



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**John Cervetto, MSW**

**Ryan Wythe**

**Jacqueline Chan, MPH**

**Alejandra Barrio, MPP**

**Amalia Freedman**

**Project Director**

**Project Manager**

**Project Analyst**

**Project Analyst**

**Project Sponsor**



This report was developed by Resource Development Associates under contract with Stanislaus County Workforce Development.

Resource Development Associates, 2020

### **About Resource Development Associates**

Resource Development Associates [RDA] is a consulting firm based in Oakland, California, that serves government and nonprofit organizations throughout California as well as other states. Our mission is to strengthen public and non-profit efforts to promote social and economic justice for vulnerable populations. RDA supports its clients through an integrated approach to planning, grant writing, organizational development, and evaluation.

# Acknowledgment from Stanislaus County

## Workforce Development

Stanislaus County Workforce Development launched a commuter survey to study our local community. Resource Development Associates (RDA) was contracted to survey Stanislaus County residents who travel outside the County for work to better understand commuter experience, job skills, and employment needs. Additionally, there were focus groups via, virtual and in-person meetings, with local commuters and employers to get the full story of the commuting experience. Stanislaus County Workforce Development's intention is to utilize those responses to inform its ongoing outreach efforts to attract businesses that support and grow the local workforce. ***These efforts will ultimately lead to job opportunities with shorter commute times, less traffic congestion, better air quality, but most importantly keeping Stanislaus County residents close to home for work/life balance.***

We want to thank the Workforce Development Board, whom oversee and support our vision of being dedicated to developing a skilled workforce that strengthens business and contributes to the economic success of the community. We additionally would like to express appreciation for the support and assistance of Stanislaus County's Chief Executive Office, and highlight the commitment of former Assistant Executive Officer, Keith Boggs, and Management Consultant, Kelly Covello, from inception to completion of this study.

Stanislaus County is grateful to everyone who participated in and supported this study. Thank you to the residents of Stanislaus County who engaged in this study's survey and focus groups. This study would not have been possible without their willingness to provide information about their commutes, careers, daily life, and demographic information. We also thank the business leaders who provided insight into the complexity of selecting sites for locating their businesses.

A special acknowledgement and thank you to the amazing team at Resource Development Associates for all their hard work in compiling, designing, and editing this report. Along with this acknowledgement is the appreciation of the Workforce Development staff who spent long hours assisting, reading and sharing insights.

2020 has been such an unpredictable year and has provided everyone a host of new challenges and disruptions. Workforce Development understands the impact COVID-19 has had to the economy and its workforce. We have adapted and accelerated efforts and will continue to bring the highest level of service and commitment. Included in the report is an additional COVID-19 impact section to bridge the report with some of the experienced changes.

We continue to work in collaboration with our partners, stakeholders, and the public to deliver insight and guidance for the betterment of the community. This collective effort and resulting *2020 Stanislaus County Commuter Study* will undoubtedly serve to bolster the workforce and economy of Stanislaus County.

Sincerely,



Doris Foster  
Director of Stanislaus County Workforce Development



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# COVID-19 Impact Statement from the Research Team

Stanislaus County Workforce Development [SCWD] commissioned the 2020 Stanislaus County Commuter Study to understand the characteristics and commuting patterns of Stanislaus County residents. The project began in 2019 during a period characterized by economic expansion and low unemployment, but also high costs of living, especially housing costs. Over the past decade, Central Valley counties were seeing more and more of their labor force commuting to the Bay Area for work each day for higher wages and a wider range of opportunities in the Bay Area than in the local job markets. This trend had impacts at the local level, both economically and socially. The purpose of this study was to collect critical data and information to develop and implement economic development strategies to retain and expand the County's local workforce and businesses.

Data collection for this study concluded in December of 2019 and the final report was scheduled to be presented in March 2020. However, in that same month, the reality of the SARS COVID-19 pandemic fully set in and California issued a shelter-in-place order to reduce the rate of infection across the state, leaving only essential businesses and services operating normally. As a result, SCWD decided to delay the release of this report until the fall 2020 and focus on addressing the local impacts of COVID-19.

The economy today is vastly different than it was just five months ago and what the future holds remains unclear. While the immediate intended uses of this report may have changed since the pandemic began, the information it contains still offers value to government, business, and commuters in light of the pandemic and the resulting economic volatility. The 2020 Commuter Study provides a description of the local economy, commuter trends, and workforce characteristics prior to the pandemic. As such, this report not only serves its original purpose of informing local and regional economic development strategies, but also provides a timely benchmark to support recovery efforts to rebuild and restore the local economy and workforce.

## Understanding Economic Impacts of COVID-19

The economic impacts of the COVID-19 pandemic are unprecedented, ubiquitous, and consistently evolving. The pandemic and subsequent shutdowns have resulted in an extraordinary global recession marked by unusually high and rapid unemployment, economic recession, and a steep drop in gross domestic product.<sup>1</sup> While uncertainty defines most recessions, the 2020 recession is unique in its underlying causes and the size, scale, and suddenness of its onset. Market forces typically drive economic contractions, whereas the 2020 recession is largely the result of a public health emergency that required all but essential economic activity and health and human safety-net services to freeze. The shutdown devastated certain industries, such as hospitality and leisure, which rely on social gatherings and close interactions, while other industries, such as transportation and warehousing, have experienced a boom in business. At the same time, economic transfers sharply increased due to the Coronavirus Aid Relief and Economic Security (CARES) Act that included enhanced unemployment compensation, small business loans, eviction moratoriums, and student loan payment suspensions. While these stimulus efforts can be attributed to both stabilizing poverty

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<sup>1</sup> U.S. Congressional Budget Office 2020. *Interim Economic Projections for 2020 and 2021*.

rates<sup>2</sup> and increasing consumer spending,<sup>3</sup> their impacts may be short lived given that CARES Act benefits are temporary and additional benefits are needed to maintain current trends. Lastly, dynamic COVID-19 infection rates throughout the US and especially within California have caused the economy to shut down, reopen, and shut down once more, further mudding the current economic outlook.



While some of the immediate impacts of COVID-19 are beginning to be understood, we must also acknowledge that 2020 is uncharted waters from economic, public health, and public policy standpoints. It will likely be years before the extent of COVID-19's impact is fully measured.

### **The Economic Impact of COVID-19 in Stanislaus County**

Stanislaus County, like most counties in California, has experienced economic challenges since the COVID-19 pandemic began. In February 2020, the County's unemployment rate was 6.6% and rose to a high of 17.5% in April. Unemployment improved some through May and June, but has hovered around 15%.<sup>4</sup> Employment levels are expected to continue to improve over the next 12 months, but are forecasted to be about 6.4% below the levels seen at the start of 2020.<sup>5</sup> Following the same trend, economic activity is expected to improve over the second half of 2020, however, the economic output of 2021 is expected to be lower than the fourth quarter of 2019.<sup>6</sup>

### **Largest Impacts in the Service, Retail, and Hospitality Industries and Occupations**

While the economic recession has broad impacts on nearly all aspects of Stanislaus County's economy, the pandemic and ensuing public health response have amplified unfavorable economic conditions for specific industries and occupations. Employment data from the first half of 2020 and forecasts that model COVID-19 impacts on the economy both point the largest contractions to industries and occupations connected to hospitality, food service, personal care, and brick-and-mortar retail. In contrast, industries and occupations tied to healthcare, transportation of goods, and logistics are expected to outperform overall economic and labor market growth.

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<sup>2</sup> Parolin, Z., Curran M.A., and Wimer, C. 2020. *The Cares and Poverty in the COVID-19 Crisis*. Retrieved from <https://www.povertycenter.columbia.edu/news-internal/coronavirus-cares-act-forecasting-poverty-estimates>

<sup>3</sup> Chetty, Raj, et al. 2020. "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data." NBER. Retrieved From [www.nber.org/papers/w27431](http://www.nber.org/papers/w27431)

<sup>4</sup> U.S. Bureau of Labor Statistics 2020. *Economy at a Glance, Modesto Metropolitan Statistical Area (MSA)*

<sup>5</sup> Chmura Economics & Analytics JobsEQ, Occupational Snapshot including COVID-19 Occupational Forecast

<sup>6</sup> U.S. Congressional Budget Office, 2020.

**Table 1. Top occupation groups impacted by COVID-19<sup>7</sup>**

Occupation Group	2020 Q1 Employment	COVID-19 Impact on Employment <sup>8</sup>	Forecast Annual % Growth, 12 mo.
<b>Personal Care and Service Occupations</b>	18102	-12,830	-16.2%
<b>Food Preparation and Serving</b>	5,113	-3,810	-21.8%
<b>Arts Design, Entertainment, Sports, and Media</b>	2,220	-750	-8%
<b>Sales and Related</b>	19,729	-8,100	-7.2%
<b>Occupations Overall</b>	207,267	-42,870	-6.4%

Most occupations in Stanislaus County are expected to contract over the next 12 months either at or below the rate of overall employment growth. Occupations that fall under food preparation and serving and personal care and service are expected to contract by -21.8% and -16.2% respectively.<sup>9</sup> To a lesser extent, but more than the overall labor market contraction, occupations related to arts and entertainment, sales and related services are expected to contract. These five occupations combined account for nearly a quarter (24.6%) of all employment in Stanislaus County.<sup>10</sup>

From an industry standpoint, hospitality and leisure and retail trade sectors have seen the largest percent of job losses, shown in the table below.<sup>11</sup> Given that businesses in these two sectors mostly include bars and restaurants, retail stores, spas, hotels, salons, entertainment venues, and gyms, all which have been mandated to close by the State shelter-in-place order or have more difficulty pivoting to comply with social distancing rules, they are at higher risk for job losses. Public education job losses have been primarily in state and local education subsectors, which is likely a result of staffing reductions due to K-12 and post-secondary public education transitioning to online classes. The contraction within the professional and business services is likely driven by a diminishing demand for professional services as other businesses ramp down or close.

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<sup>7</sup> *Ibid.*

<sup>8</sup> Data pulled from Center for Business and Policy Research. 2020. "Estimated Employment Impacts of COVID-19 on Northern California." University of the Pacific.

<sup>9</sup> Chmura Economics & Analytics JobsEQ, Occupational Snapshot including COVID-19 Occupational Forecast

<sup>10</sup> Chmura Economics & Analytics JobsEQ, Occupational Snapshot including COVID-19 Occupational Forecast

<sup>11</sup> California Employment Development Department (EDD), Labor Market Information Division (LMID). July 2020. *Labor Market Information Release, Modesto MSA*. Retrieved from:

<https://www.labormarketinfo.edd.ca.gov/file/lfmonth/modestopds.pdf>

**Table 2. Top industries with largest change in employment, June 2019 to June 2020<sup>12</sup>**

Industry Sector Group	June 2019 Employment	June 2020 Employment	12-mo. Net- Change	12-mo. % Change
<b>Hospitality and Leisure</b>	19,500	14,500	-5,000	-25.6%
<b>Trade, Transportation and Utilities</b>	37,400	32,700	-4,700	-12.6%
<b>Retail Trade</b>	22,300	18,400	-3,900	-17.5%
<b>Public Education</b>	30,700	27,100	-3,600	-11.7%
<b>Professional and Business Services</b>	15,300	13,600	-1,700	-11.1%

While job losses in Stanislaus County have occurred in most industries, the top industries that Out-of-County commuters work in seem less impacted. For instance, the construction industry that accounts for 13% of Out-of-County commuters, has experienced a 9.3% decrease in employment compared to the 11.4% decrease in overall employment. Healthcare and manufacturing industry sectors saw even smaller job losses with employment decreases of 4.6% and 1.9% respectively.<sup>13</sup> Although the causes for such uneven distribution of job losses across industries are not immediately clear, there does seem to be some indication that losses are connected to whether an industry is deemed essential and required to continue operations with certain precautions or can pivot operations to adapt to a largely remote and socially-distanced economy.

### **Working from Home Is Transforming the Workforce**

The pandemic has also disrupted and vastly changed the very nature of work. Since March 2020, it is estimated that about 42% of the workforce now works from home (WFH) full time compared to about 2% in 2018.<sup>14</sup> The ability of whole sectors of the economy to rapidly shift to a remote work allowed large sections of the economy to continue operating and likely prevented an economic catastrophe far worse than the one already experienced. Since making the shift, WFH has gone better than expected. Remote work has allowed for better work-life balances, increased productivity, more flexibility, and a greater access to talent.<sup>15</sup> Employers and business owners have also seen that having a remote workforce lowers operating costs, overhead, and liabilities that come with operating out of physical location. On the other hand, the shift to remote work has created a new set of burdens and challenges for both workers and managers, including blurred lines between home and work space and a sense of being “always on,” as well as challenges in training new staff, assessing performance, building team collaboration, and completing projects on time.<sup>16</sup> Worker preferences for WFH post-COVID varies, with almost 40% preferring to never or

<sup>12</sup> *Ibid.*

<sup>13</sup> California EDD LMI. July 2020.

<sup>14</sup> Bloom, N. 2020. “How Working from Home Works Out”. Stanford Institute for Economic Policy Research. Policy Brief. June 2020.

<sup>15</sup> McKinsey & Company. 2020. “Reimagining the Post-pandemic Workforce” McKinsey Quarterly. July 7, 2020.

<sup>16</sup> Thompson, D. 2020. “The Workforce Is About to Change Dramatically” The Atlantic. August 6, 2020.

rarely WFH and about 60% preferring to WFH one day a week or more.<sup>17</sup> Surveys of business executives across all industries indicate that working from home in some form will continue if not grow in the post-pandemic world. This rapid shift will not only change the workforce itself, but is also expected to reshape where workers live, spend money, and invest their time.

For Stanislaus County, a commuter community, a reduction in the number of workers commuting to the Bay Area each day will have social and economic impacts. Prior to COVID-19, nearly half (48%) of all workers in Stanislaus County commuted out of the county for work.<sup>18</sup> For many, WFH may have provided a welcome reprieve from Out-of-County commutes that average 63 miles in distance and about 100 minutes in travel time. Without such a costly commute, many workers likely have more money and time. Prior to the pandemic, workers spent up to 50% of their daily spending at restaurants, bars, and shops in proximity of their workplace, generally in urban city centers.<sup>19</sup> A large number of workers remaining at home for work will bring benefits to rural and suburban economies as workers spend money in local restaurants, bars, and shops in the communities where they live rather than in the places where they physically work.

Lastly, the amount of time that remote work allows Stanislaus County commuters to reclaim and the impacts this can have on local communities and families should not be underestimated. Workers who previously spent significant time either commuting or working outside the County, will be free to spend more time with their families and in their communities. This change has potential to positively boost the quality of life and sense of wellness for many former Out-of-County commuters and to help build a stronger local community and civil society.

## **Anticipated Impacts of COVID-19**

### **Remote Work Skills Gaps**

Essential workers, on the other hand, have continued to go into work. They make up nearly 26% of the workforce; are generally concentrated in retail, healthcare, protective services, transportation, and food service sectors<sup>20</sup>; and work in occupations and industries that do not naturally lend themselves to remote work. Many of the jobs in these sectors are considered low wage, have been hardest hit by the pandemic, and often come with a higher risk of exposure to COVID-19. Others have not been able to WFH because of various challenges including having kids at home, not having an appropriate workspace, and lack of access to effective internet services. Those unable to WFH, either due to their current role or social and economic barriers, have the potential to create concerning workforce skills gaps down the road. As the workplace further adapts remote work practices, this population is at risk of being left behind as their skills and knowledge relevant for remote work erode or become outdated.

### **Opportunities for Bay Area Adjacent Counties**

A noticeable change since the pandemic began has been the movement of urban residents to suburbs and rural areas. Given this trend, combined with the likelihood that many employers will embrace some form of remote work in a post-COVID world, companies may feel they no longer need to be located in cities or population centers to access a talented workforce. It may also be that much of the talent workforce no longer lives primarily in cities. Bay Area companies that contend with steep overhead expenses due to the

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<sup>17</sup> Bloom, N. 2020.

<sup>18</sup> Based on Findings from the 2020 Stanislaus County Commuter Survey.

<sup>19</sup> Bloom, N. 2020.

<sup>20</sup> *Ibid.*

region's high cost of living are at risk of a large workforce exodus. If a company's physical location becomes less important in attracting talent, Stanislaus County may have an opportunity to attract companies looking to relocate outside of the urban centers.

## The 2020 Stanislaus County Commuter Study in a Changing Economy

The purpose of this additional section of the report is to acknowledge the magnitude of the rapid changes to Stanislaus County's workforce and economy since early 2020 and provide examples to highlight how much things have changed. This report provides a record of a very recent, yet bygone period defined by the region's long-term economic growth, low unemployment, and long and arduous commutes to and from work. The information in this report is certainly no longer a current description of the Stanislaus County's workforce or local economic conditions; however, this report offers a different kind of value that may foster even greater utility.

The *2020 Stanislaus County Commuter Study Report* provides one of the few, if not only, snapshots of local workforce characteristics and trends right before the pandemic hit. The report provides economic, labor market, and commuter trends that can serve as benchmarks and points of comparisons for future workforce and economic development efforts. This data can describe the baseline labor market and commuter trends prior to COVID-19, which can provide power to future analyses aimed at measuring what changes to labor force, commuter, and economic trends occurred and their resulting impacts. These benchmarks can inform local and regional economic development recovery efforts, including helping to set strategic objectives and metrics, workforce and economic program design, and strategies to attract businesses seeking to relocate.

Leadership from the County, SCWD, industries, businesses, and labor can look to this report to inform current and future planning and to help understand the full impact of COVID-19, including:

- How have industries, occupations, and employment changed temporarily and permanently?
- How do long-term economic plans and strategies need to be adjusted considering the changes?
- What skills, occupations, and industries should be developed?
- What should be considered in making the business case to attract new businesses and industries?

Lastly, the COVID-19 pandemic's rapid and devastating impact on the economy is still evolving and will continue to change well into 2021, if not longer. As such, many questions outside the scope of this report remain unanswered. We highly recommend Stanislaus County Workforce Development and the County Executive Office consider further research to fully understand recent changes to the County's economy and workforce and to forecast short- and long-term impacts of the pandemic.

# Executive Summary

The *2020 Stanislaus County Commuter Study* is a deep investigation of commuting patterns in Stanislaus County, including a profiling of individual commuting behavior and tangible opportunities for workforce development. Commissioned by Stanislaus County Workforce Development [SCWD] and conducted by Resource Development Associates [RDA], this report provides SCWD with **critical data and information to develop and implement economic development strategies that will retain and expand the County's local workforce and businesses.**

Findings from the study are framed according to two key objectives:

1. To gain a clear understanding of commuting behavior, including who is commuting, where they are commuting, and barriers to working locally.
2. To examine industry trends and opportunities for workforce growth.

## Commuter Assessment – Profiling Stanislaus County Commuters

With 24% of Stanislaus County residents commuting outside of the County,<sup>21</sup> and often to regions over 50 miles away [constituting “super-commuters”], it becomes important to understand more about factors contributing to commuting. Residents commuting out of the County earn considerably more per year [e.g. those commuting to the Bay Area earn an average of \$35,700 more] but are sacrificing quality of life factors, such as health and time with family. The Construction and Health Care industries are the biggest employers of Out-of-County commuters, and Management occupations specifically are the most common among Out-of-County commuters. A key finding, however, is that 77% of those individuals commuting out of Stanislaus County would be willing to take a job with a similar or slight decrease in salary to work closer to home. This provides valuable insight for generating growth in the local workforce.

## Stanislaus County Workforce and Economic Opportunities

The primary reason for the commuting trends seen in Stanislaus County is related to the differences in wages and cost of living, with higher wages outside of the County, but a lower relative cost of living within. The County has the workforce to remain within Stanislaus County with a labor participation rate near the state average [61.4% compared to California's 63%] and it may require further development of existing industries to fuel more workforce development. Both nationally and within Stanislaus County, the Health Care industry makes up a large portion of employment. It is also the industry sector with the strongest economic forecast. Locally, the Health Care industry alone is expected to add 3,635 new jobs in Stanislaus County by 2025. Other industries to pursue for potential investment include: Construction; Logistics/Transportation; Educational Services; and Professional, Scientific, and Technical Services. Ultimately, resources invested to diversify the industry sectors responsible for employing Stanislaus County residents will make for a stronger and more resilient community

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<sup>21</sup> U.S. Census Bureau, *2018 American Community Survey, 5-year Estimate*.

# 2020 Stanislaus County Commuter Study

## REPORT SUMMARY

### Why do so many people commute?

 **1 in 4**

24% of Stanislaus County residents work outside the county. Over half of these commuters travel to the Bay Area.

The imbalance between **affordable homes in the San Joaquin Valley** and **a thriving job market in the San Francisco Bay area** provides a recipe for long distance commuting.



**\$272,400**

Median single-family home price in Stanislaus Co.

**\$770,500**

Median single-family home price in the Bay Area

Source: American Community Survey 2014-2018



**\$57,387**

Median annual household income in Stanislaus Co.

Source: American Community Survey 2014-2018



**\$100,514**

Median annual household income in the Bay Area

### How does commuting affect people's lives?

Out-of-county commuters spend about **twice as much money on commute costs** compared to residents who work within Stanislaus County.

They are concerned for their personal safety due to **poor driving conditions** and **reckless driving behavior** of other drivers.

On a weekday morning, a one-way trip...



- ▶ to Sacramento can take up to **2 HOURS AND 30 MINS.**
- ▶ to San Jose can take up to **3 HOURS AND 10 MINS.**
- ▶ to San Francisco can take up to **3 HOURS AND 55 MINS.**

### Employment trends have been strong, but employment is concentrated in few industries.

Over the last ten years, Stanislaus County has gained

**31,151 jobs.**

Source: Chmura Economics & Analytics, JobsEQ Labor and Wage Trends (as of 2019Qs)

### Investments in these five industries will help to diversify the local economy and attract commuters to stay local.

The recommended industries demonstrate positive performance for job demand, both historic and forecasted growth, and represented at least 5% or more of the out-of-county commuter population.



Construction



Educational Services



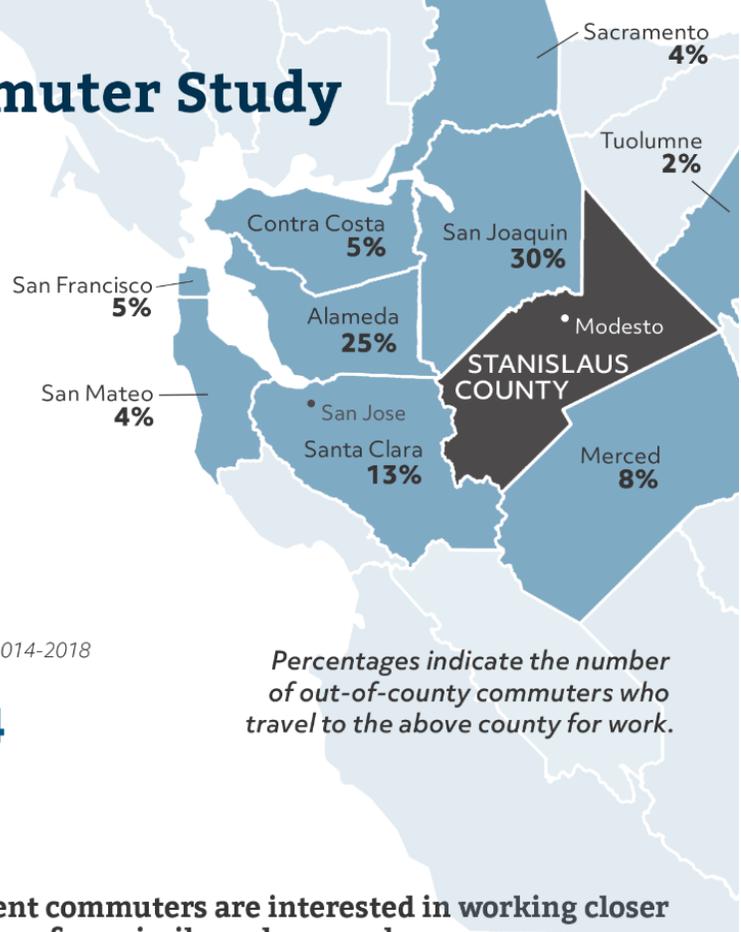
Health Care and Social Assistance



Professional, Scientific, and Technical Services



Transportation And Warehousing



Percentages indicate the number of out-of-county commuters who travel to the above county for work.

### Current commuters are interested in working closer to home for a similar salary—or less.

**83%** of commuters would be willing to take a similar job closer to home.

In 2019, **1 in 3 commuters** indicated they would accept **a slightly lower salary** to work closer to home, which is nearly ten percent higher than in 2000.

Factors in addition to salary that would influence commuters' decision to switch to a job closer to home include **benefits, professional development**, and an embrace of **diversity and equality**.

Still, the region is potentially vulnerable due to **a lack of diverse industries and occupations** in the county. One in eight jobs in Stanislaus County are directly tied to the **agriculture industry** or related **food/beverage manufacturing**.



# Glossary of Terms

Key Term	Definition
<b>Bay Area Commuter</b>	Any Stanislaus County resident who travels outside of Stanislaus County for work to any of the seven core Bay Area counties [Alameda, Santa Clara, San Mateo, San Francisco, Marin, Solano, and Contra Costa] as measured by the 2020 Commuter Survey.
<b>Employed Stanislaus Residents</b>	Stanislaus County residents who are employed, regardless of where they commute for work.
<b>Employees Working in Stanislaus</b>	Employees that work in Stanislaus County, regardless of where they reside.
<b>Forecasted Job Growth</b>	<p>Uses the average annual growth rate of industries projected into the future by using the following formula:</p> $\left[ \frac{a + b}{a} \right]^{[c]} - 1$ <p><i>a = current employment</i>  <i>b = employment growth</i>  <i>c = # of years</i></p>
<b>Historic Job Growth</b>	Measured by the average job growth [job growth average across four fiscal quarters] for a past time period.
<b>In-Commuter</b>	A worker who resides outside of Stanislaus County and commutes into Stanislaus County for work. In-Commuter figures are determined through data accessed via JobsEQ.
<b>Industry/Industry Sector</b>	A specific group of companies and businesses that operate in the same segment of the economy as defined by the North American Industry Classification System (NAICS).
<b>Job Demand</b>	<p>Indicator of an industry’s future need to hire additional workers. Job demand is measured by calculating:</p> <p>[# of employees who are leaving the workforce in a particular industry (e.g. retirement, pursuing education)] + [# of employees transferring to a different industry] + [# of jobs expected to be created]</p>
<b>Job Growth</b>	Describes the amount of change in number of people employed in a given occupation, industry, company, etc., for a specific time frame.

**JobsEQ®** A proprietary technology platform for labor market analytics and economic research developed by Chmura Economics and Analytics [<http://www.chmuraecon.com/jobseq/>]. JobsEQ brings together data on employment largely derived from the Bureau of Labor Statistics. For a complete list of data sources JobsEQ utilizes, see Appendix D.

<b>Labor Force<sup>22</sup></b>	The number of people who are employed plus the number of people who are unemployed and looking for work.
<b>Local Commuter</b>	Any Stanislaus County resident who travels within Stanislaus County for work as measured by the 2020 Commuter Survey.
<b>Net-Commute</b>	The overall number of individuals that commute into a given county for work, calculated by subtracting the number of out-commuters from the number of in-commuters. A negative net commute means that more individuals are commuting out of a county than those who are commuting into a county. Net-commute figures are determined through data accessed via JobsEQ.
<b>Non-Bay Area Commuter</b>	Any Stanislaus County resident who travels outside of Stanislaus County for work to a destination that is not considered part of the Bay Area region as measured by the 2020 Commuter Survey.
<b>Occupation</b>	Jobs or professions defined by a specific group of duties, skills, education, and training as classified by the Standard Occupational Classification (SOC) system.
<b>Out-Commuter</b>	A worker employed outside of Stanislaus County but who resides in Stanislaus County. Out-Commuter figures are determined through data accessed via JobsEQ.
<b>Out-of-County Commuter</b>	Any Stanislaus County resident who travels to a destination outside of Stanislaus County for work. Consists of Bay Area Commuters and Non-Bay Area Commuters as measured by the 2020 Commuter Survey.
<b>Super-Commuter<sup>23</sup></b>	An individual who travels more than 50 miles or for longer than 90 minutes to get to work.
<b>Transferable Skills</b>	The portable qualities of workers that can be taken from one job to another, such as communication skills, teamwork, and leadership ability, among others.

<sup>22</sup> U.S. Bureau of Labor Statistics Glossary: <https://www.bls.gov/bls/glossary.htm>

<sup>23</sup> For commuter, super-commuter, and other commuter definitions, see: Rapino, M.A., Fields A.K. (2013). Mega Commuters in the U.S. Time and Distance in Defining the Long Commute using the American Community Survey. U.S.A. Retrieved from

[https://pdfs.semanticscholar.org/4c33/7502475a417d67f3e86205b3ae17fd5c89c9.pdf?\\_ga=2.152520753.944879932.1572308715-127029090.1572308715](https://pdfs.semanticscholar.org/4c33/7502475a417d67f3e86205b3ae17fd5c89c9.pdf?_ga=2.152520753.944879932.1572308715-127029090.1572308715).

# Introduction

## **Stanislaus County Workforce Development Mission:**

*Work with businesses to determine the needs of in-demand occupations and develop a skilled workforce that strengthens businesses and contributes to the economic success of the community.*

Stanislaus County Workforce Development [SCWD] is a business-led public body that oversees Workforce Innovation and Opportunity Act [WIOA] and Welfare to Work-funded employment and training programs and services throughout Stanislaus County. SCWD's primary mission is to work with businesses to determine the needs of in-demand occupations and develop a skilled workforce that strengthens businesses and contributes to the economic success of the community. In addition to overseeing the delivery of workforce development services, training, and other supports, SCWD is also responsible for initiating workforce research of local and regional labor markets, employers, and other relevant indicators to inform workforce development efforts both within Stanislaus County and regionally.

Stanislaus County is a well-known international agri-business hub. One in eight jobs in Stanislaus County is directly tied to the agriculture industry or related food/beverage manufacturing.<sup>24</sup> While the agricultural industry is of key importance to the local economy, being so heavily reliant on one sector for the County's economy places Stanislaus at significant risk due to a lack of industrial diversification.

However, Stanislaus County is situated in the northern San Joaquin Valley, at the intersection of the San Francisco Bay Area region,<sup>25</sup> the Sacramento Capital Region, and the Southern San Joaquin Valley region.<sup>26</sup> The interlocking economic systems, shared natural resources and ecosystems, and common transportation systems link these population centers together as part of the Northern California Megaregion and can counteract some of the potential economic risk Stanislaus County faces.<sup>27</sup> Further, these



regions are connected through the commuter segment of the local labor force. **Understanding the local commuter population will enable SCWD to take a proactive approach to assist businesses and workers facing potential layoffs, closures, or job losses by providing technical assistance and re-employment support in alignment with political and economic changes within the Northern California Megaregion.** It will also allow SCWD to understand what type of employers would be attracted to Stanislaus County based on the available talent pool to support local economic and workforce growth.

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<sup>24</sup> <http://www.stanag.org/pdf/cropreport/cropreport2018.pdf>

<sup>25</sup> Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties

<sup>26</sup> Northern San Joaquin Valley includes San Joaquin County, Stanislaus County, and Merced County; Southern San Joaquin Valley includes Merced, Fresno, Madera, Tulare, and Kern County.

<sup>27</sup> For additional context see the SPUR report:

[https://www.spur.org/sites/default/files/publications\\_dfs/SPUR\\_The\\_Northern\\_California\\_Megaregion.pdf](https://www.spur.org/sites/default/files/publications_dfs/SPUR_The_Northern_California_Megaregion.pdf)



The 2020 Stanislaus County Commuter Study<sup>28</sup> aims to build upon findings from two previous commuter studies, the Altamont Pass Commuter Study [October 2000]<sup>29</sup> and the Altamont Pass Commuter Study Update [April 2006],<sup>30</sup> which indicated an increasingly diversified, available talent pool of resident commuters. Compared to the 2000 and 2006 studies that focused on commuters going over the Altmont Pass, this study focuses specifically on commuters who are Stanislaus County residents, which greatly increased the number of County residents surveyed.

Survey Year	Stanislaus County Commuters Surveyed
2000	900 Commuters
2006	463 Commuters
2019	3061 Commuters

Where possible throughout this report, comparisons are made between findings from this study and the 2000 and 2006 studies. However, as this study focused on a different subset of commuters than the previous studies, comparisons are not always possible.

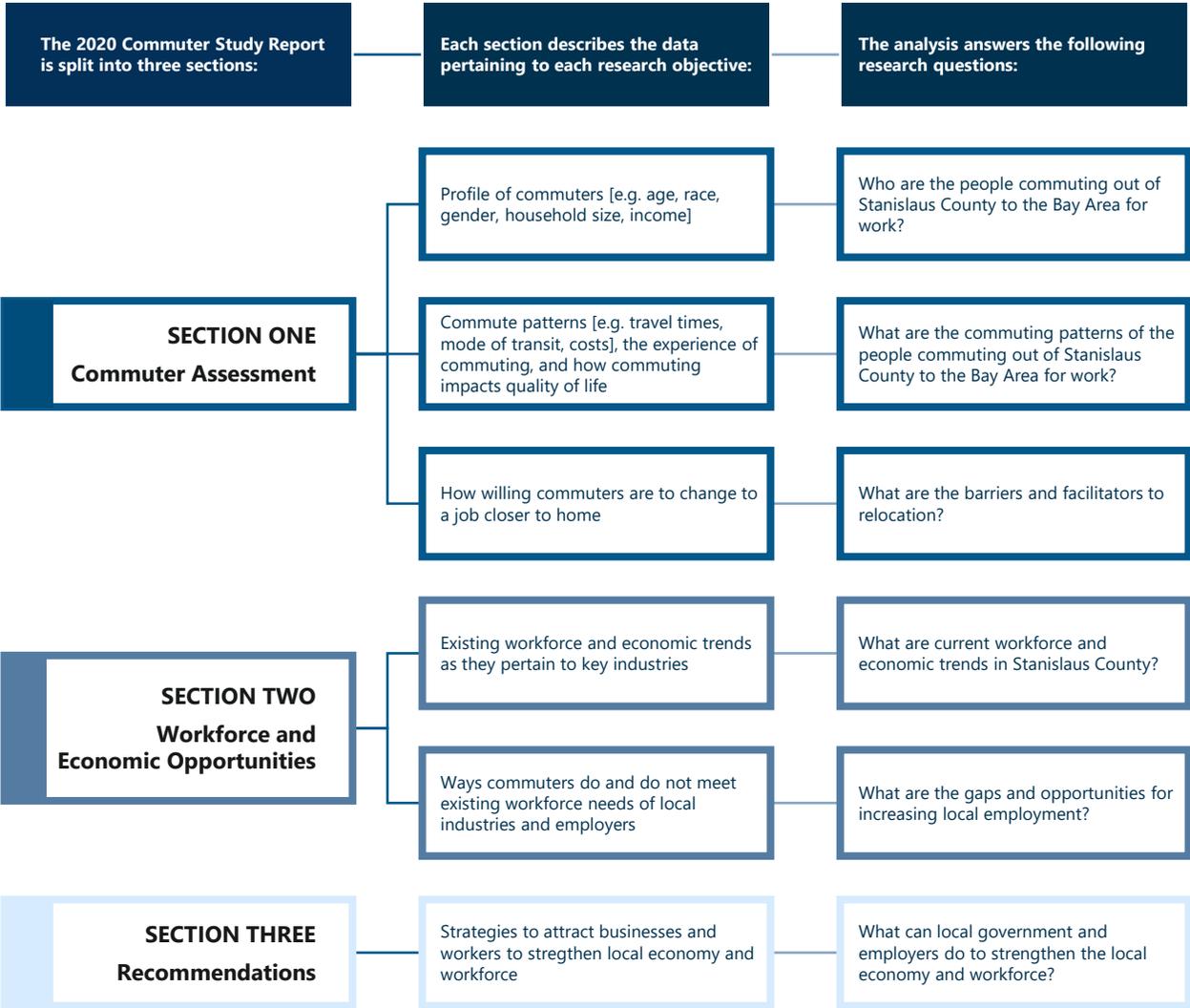
The **2020 Stanislaus County Commuter Study provides SCWD with critical data and information to develop and implement economic development strategies that will retain and expand the County’s local workforce and businesses.** Understanding what talent resides in Stanislaus County will enable Workforce Development to market to businesses for the purpose of establishing and expanding their companies and providing more employment opportunities locally. If employers downsize or cease operation, having diversified employers in Stanislaus County will provide the local labor force greater opportunity for alternative employment and will retain more of the labor force in the County.

<sup>28</sup> Primary data collection for the 2020 Commuter Study was conducted from September to December 2019.  
<sup>29</sup> Systan Inc, *Altamont Pass Commuter Study*, submitted to The San Joaquin Council of Governments and The San Joaquin Partnership, October 2000.  
<sup>30</sup> San Joaquin Council of Governments, *Altamont Pass Commuter Study 2006 Update*, April 2006.

# 2020 Stanislaus County Commuter Study Overview

This study is both a point-in-time and longitudinal study that examines commuters in order to provide SCWD with critical and useful insight into the characteristics, motivations, and opportunities for Stanislaus' local workforce and employers. The *2020 Stanislaus County Commuter Study* is organized into three main sections: **Commuter Assessment**, **Workforce and Economic Opportunities**, and **Recommendations**. Within each report section, the identified Key Findings highlight the significance of Resource Development Associate's [RDA] analysis in supporting the corresponding research objectives pertaining to that section. The figure below provides an overview of the *2020 Commuter Study Report*, research objectives, and research questions that guided the project team's work.

**Figure 1. Structure of the 2020 Commuter Study Report and corresponding research objectives**



## Research Methodology Overview

RDA employed a mixed-methods research approach that integrates both qualitative and quantitative data to best understand the status of commuters and the relationship between commuting and workforce or economic changes in Stanislaus County. This approach maximizes the validity of findings by leveraging primary data collected through commuter surveys and perspectives from commuters and employers through interviews, along with secondary labor market data to triangulate findings across data sources.

### Commuter Survey

The primary research tool the team developed for the study was an extensive survey that built on approaches used in the prior commuter studies. See Appendix A for the complete copies of the 2020 Commuter Survey in both English and Spanish. To maximize the survey’s reach, the research team and SCWD conducted rigorous marketing to recruit study participants. See Table 3 for an overview of how the 2020 Commuter Survey was implemented.

**Table 3. Commuter survey sampling methods**

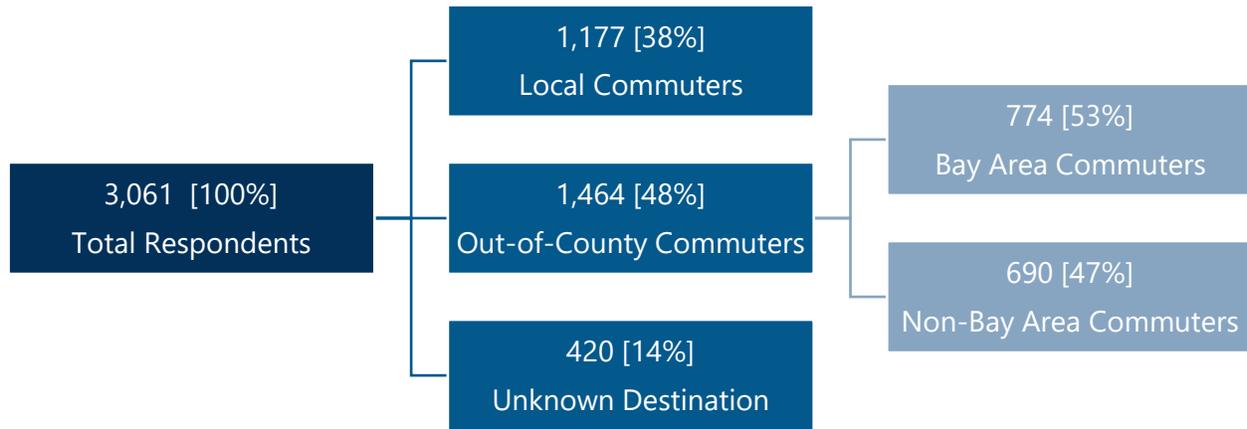
Survey Format	Survey Implementation	Sampling Method	Surveys Completed [n=3,061]
<b>Paper</b>	RDA mailed English and Spanish surveys to approximately 115,000 randomly selected Stanislaus County residents.	Random Selection	40%
<b>Online</b>	RDA launched the Commuter Survey online through the project website <a href="https://stancocommute.com/">https://stancocommute.com/</a> . The survey was available in both English and Spanish.	Convenience Selection	27%
<b>Email-Intercept</b>	RDA contracted with Davis Research Group to carry out email-intercept surveys to known email subscribers and to individuals randomly selected from California voter roll databases.	Convenience & Random Selection	33%

RDA obtained a final count of 3,061 survey responses, **exceeding the ideal sample size necessary to make inferences** about the population at a 95% confidence level. RDA’s approach to the survey data analysis included both descriptive and inferential techniques to describe trends or characteristics that can be representative of Stanislaus County’s commuter population. Appendix B has a thorough description of how RDA ensured adequate sample sizes and levels of certainty in its results in alignment with industry standards. Additionally, as with any study that relies on self-reported data and other factors, there are certain limitations to the interpretation of the results, such as reliability of people’s memory. For more information about how RDA conducted the survey data analysis, ensured representativeness of the results, and discussed further research limitations, please see Appendix C.

## Commuter Assessment

From September 2019 – December 2019, the research team implemented an extensive survey to investigate commute trends of Stanislaus County residents. Specifically, the survey was designed to yield detailed insight into characteristics of commuters and allowed for comparative analysis across commuter populations. Figure 2 below shows a breakdown of the different commuter populations by destination county who were surveyed for this study.

**Figure 2. Breakdown of total 2020 Commuter Survey respondents<sup>31</sup>**



This Commuter Assessment focuses on the Out-of-County commuter population. Out-of-County commuters are survey respondents who met study inclusion criteria<sup>32</sup> and commuted to a destination outside of Stanislaus County. Within the Out-of-County commuter population are Bay Area<sup>33</sup> commuters and non-Bay Area commuters. Results comparing the different types of Out-of-County commuters are organized by the corresponding research objectives for the Commuter Assessment:

**Figure 3. Commuter Assessment research objectives**



<sup>31</sup> “Unknown Destination” indicates the number of survey respondents who did not identify a county for their commute destination.

<sup>32</sup> Study inclusion criteria: Adult between 18-64 years old, working, and Stanislaus County resident.

<sup>33</sup> Bay Area includes the following counties: Alameda, Santa Clara, San Mateo, San Francisco, Marin, Solano, and Contra Costa.

## Demographic Profile of Stanislaus County Residents Who Commute

Over the past 20 years, the demographic profile of Stanislaus County has changed and with that so has the profile of who commutes. This section focuses on the demographic characteristics of Stanislaus County commuters in 2019. Where possible, comparisons are made to the commuter demographics reported in the 2000 and 2006 surveys. Since 2000, the demographic characteristics of commuters to the Bay Area has changed in various ways. Key demographic highlights include:

- The amount of commuters with at least a bachelor's degree has increased by almost 10 percent since 2000 from 23% to 32%.
- The percent of males has increased from 65% to 69%, while the percent of female commuters has decreased from 35% to 31%.
- The average household size of commuters has increased from 3.1 to 3.4.
- The percent of commuters that have children increased from 61% to 69% of commuters surveyed in 2019.

The strongest trend observed in Out-of-County commuter demographic characteristics is the rise in the number of commuters employed in the Construction industry who are traveling to the Bay Area for work. Key findings describe demographic characteristics that align with workers typically employed in the Construction industry, as well as the increase in average earnings justifying the commute. Key findings include:

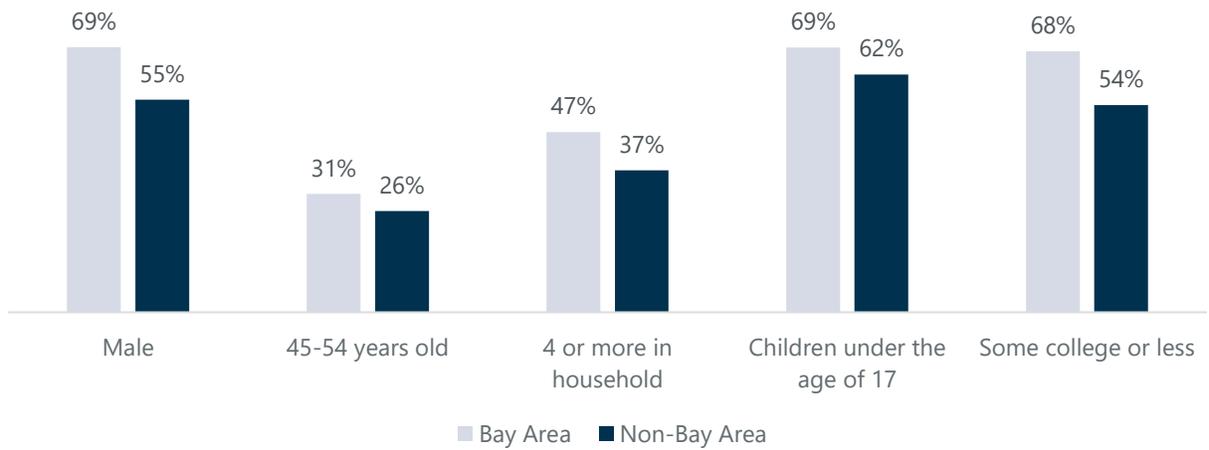
- Out-of-County commuters traveling to the Bay Area are more likely to be male, 45-54 years old, have four or more household members, children under the age of 17 in the home, and some college or less in education attainment compared to non-Bay Area commuters.
- Commuters traveling to the Bay Area for work are earning on average \$35,700 more per year compared to people commuting locally within Stanislaus County.
- Construction and Health Care and Social Assistance are the two most common industry categories employing commuters traveling Out-of-County.
- Management is the most common occupation type for all Out-of-County commuters, followed by Office and Administrative Support, and Construction and Extraction.



**Finding 1. Out-of-County commuters traveling to the Bay Area are more likely to be male, 45-54 years old, have four or more household members, children under the age of 17 in the home, and some college or less in education attainment compared to non-Bay Area commuters.**

Compared to commuters traveling to non-Bay Area counties, Stanislaus County residents commuting to the Bay Area are more likely to be male [69% vs. 55%]; between the ages of 45-54 years old [31% vs. 26%]; have four or more individuals as part of their household [47% vs. 37%]; children under the age of 17 [69% vs. 62%]; and an educational attainment of some college or [68% vs. 54%]. See Figure 4 for an overview of different demographic characteristics comparing commuters traveling to Bay Area and non-Bay Area counties from Stanislaus.

**Figure 4. Overview of demographic profile for Out-of-County Bay Area and non-Bay Area commuters**



Since 2000, demographic trends remained mostly consistent within the population of commuters traveling to the Bay Area from Stanislaus County, with the exception being gender identity of commuters. In 2020, there was a slightly higher proportion of male commuters than in previous years [69% vs. 63% in 2006] and a slightly smaller proportion of commuters to the Bay Area who identified as female than in previous years [31% in 2020, 35% in 2000, and 37% in 2006]. Trends such as the proportion of commuters traveling to the Bay Area are consistent for average household size [3.4 in 2020 vs. 3.1 in 2000], number of children under the age of 17 under their care [69% in both 2020 and 2000], and having a bachelor’s degree or higher [32% in 2020 vs. 31% in 2006]. See Table 4 for an overview of demographic characteristics trends from the past 20 years of commuters traveling to the Bay Area.

**Table 4. Demographic trends for commuters traveling to the Bay Area for work**

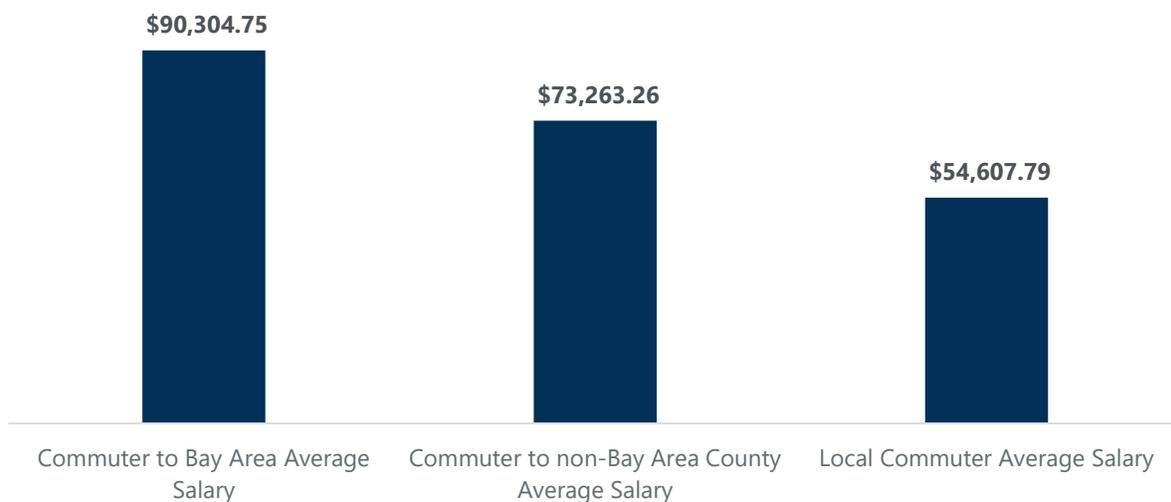
Commuter Characteristic	2000	2006	2019	20-Year Trend
Male	65%	63%	69%	
Female	35%	37%	31%	
Average Household Size	3.1	3.1	3.4	
Children [any age]	61%	69%	69%	
Bachelor’s Degree or Higher	23%	31%	32%	



## Finding 2. Commuters traveling to the Bay Area for work are earning, on average, \$35,700 more per year compared to people commuting locally within Stanislaus County.

Commuters traveling to Bay Area counties for work are earning higher salaries on average compared to other commuters. The average annual salary of commuters traveling to the Bay Area is \$90,304.75 per year compared to \$73,263.26 for commuters traveling to non-Bay Area counties or \$54,607.79 for workers who commute locally within Stanislaus County [see Figure 5]. The difference between the average annual salary for commuters traveling to the Bay Area for work and local commuters is \$35,696.96 per year. By comparison, the median household income for Stanislaus County in 2018 was \$57,387.

Figure 5. Average annual salaries for commuters by commute destination



Since 2000, the average salary of a Bay Area Commuters has risen from \$59,600.00 to \$90,304.75 representing a 34% increase over two decades or at an annualized rate of 1.7%. While this represents a modest growth over a twenty-year period, it is in line with the County's rate of growth of median income from 2000 to 2018.<sup>34</sup>

<sup>34</sup> U.S. Census Bureau, Estimate of Median Household Income for Stanislaus County, CA.

### Finding 3. Construction and Health Care and Social Assistance are the two most common industry categories employing commuters traveling Out-of-County.

The spread of commuters traveling Out-of-County for work by their industry of employment is closely distributed across six main industries, including Construction [13%], Health Care and Social Assistance [13%], Manufacturing [11%], Public Administration [10%], Educational Services [10%], and Logistics/Warehousing [10%]. There is a much higher proportion of commuters employed in Construction [18%] and Manufacturing [14%] industries traveling to the Bay Area compared to commuters traveling to a non-Bay Area counties [8% respectively for both]. The Health Care and Social Assistance industry employs almost equal proportions of commuters traveling to the Bay Area and non-Bay Area counties [12% and 14% respectively]. Table 5 provides the Top 10 industries employing Out-of-County commuters.

**Table 5. Top 10 Out-of-County industries by commute destination<sup>35</sup>**

Out-of-County Industries	All Out-of-County [n=1,298]	Bay Area [n=672]	Non-Bay Area [n=626]
Construction	13%	18%	8%
Health Care and Social Assistance	13%	12%	14%
Manufacturing	11%	14%	8%
Public Administration	10%	7%	13%
Educational Services	10%	5%	16%
Logistics/Warehousing	10%	9%	11%
Unspecified	6%	8%	4%
Professional, Scientific, and Technical Services	5%	7%	3%
Retail Trade	4%	3%	5%
Accommodation and Food Service	3%	3%	4%
All Other Industries	15%	15%	15%

<sup>35</sup> Survey respondents were not required to provide their industry. As a result, the n-values for Out-of-County commuters differ from the total number surveyed listed in Figure 2 on page 5.

#### **Finding 4. Management is the most common occupation type for all Out-of-County commuters, followed by Office and Administrative Support, and Construction and Extraction.**

Commuters traveling to their jobs in Bay Area are primarily in Management [17%]; Construction and Extraction [13%]; Office and Administrative Support [9%]; Transportation and Material Moving [7%]; Production [7%]; and Installation, Maintenance, and Repair [7%] occupations. These trends vary slightly compared to commuters traveling to non-Bay Area counties where Management [16%]; Office and Administrative Support [14%]; Healthcare Practitioners and Technical [9%]; Education, Training, and Library [9%]; and Business and Financial Operations [7%] are the five most common occupation categories. See Table 6 for an overview of the Top 10 occupations among the Out-of-County commuter population.

**Table 6. Top 10 Out-of-County occupations by commute destination**

Top 10 Out-of-County Occupations	All Out-of-County [n=1,419]	Bay Area [n=745]	Non-Bay Area [n=674]
Management	16%	17%	16%
Office and Administrative Support	11%	9%	14%
Construction and Extraction	9%	13%	4%
Transportation and Material Moving	7%	7%	6%
Healthcare Practitioners and Technical	6%	4%	9%
Production	6%	7%	5%
Business and Financial Operations	6%	5%	7%
Installation, Maintenance, and Repair	5%	7%	4%
Education, Training, and Library	5%	2%	9%
Sales and Related	5%	4%	5%
All Other Occupations	24%	25%	23%

As a Central Valley County adjacent to the Bay Area Region, Stanislaus workers have access to two interconnected regional economies and a diverse variety of career opportunities. Since 2000, the economies of both regions have experienced periods of contraction and growth and have seen the workforce evolve as new industries and occupations have emerged while others have become obsolete. The biggest change in occupation trends over the past 20 years is the increase in the number of commuters traveling to the Bay Area employed in Construction-related occupations. Since 2006, the number of commuters employed in Construction occupations increased by 6% [from 7% in 2006 to 13% in 2020], as demonstrated in Table 7. This trend is supported by previous findings regarding the proportion of commuters represented in the Construction industry. The growth in the Construction occupation is also consistent with sharp increases in commercial and residential construction projects in the Bay Area since 2010.<sup>36</sup>

<sup>36</sup> Metropolitan Transportation Commission, Vital Signs. *Historical Trend for Housing Production – Bay Area 1990 – 2018*. For more information see: <https://www.vitalsigns.mtc.ca.gov/housing-production>



**Table 7. Occupation trends for commuters traveling to the Bay Area for work**

Occupation	2000	2006	2020	20-Year Trends
Administrative and Support Services	12%	9%	9%	
Construction	11%	7%	13%	
Computers	10%	5%	5%	
Manufacturing	10%	7%	7%	
Engineering	8%	5%	5%	

The number of Bay Area commuters working in Administrative and Support Services; Computing; Manufacturing; and Engineering occupations has slightly decreased since 2000. However, those percentages are unchanged since 2006, suggesting that the workforce demand in those industries has remained relatively stable over the past 14 years.



*“Driving gets riskier every year as more and more cars fill the roads, with an unfortunately high number of people who are stressed out, use their phones while driving, are impatient, drive too fast, or otherwise practice poor driving habits.”*

*– Stanislaus County resident*

*“It’s a part of life. To get a better paying job, you have to commute to the Bay. I could find the same job in Modesto making \$10-15 per hour less. It’s the tradeoff.”*

*– Stanislaus County resident*

## Commute Patterns and Experiences for Stanislaus County Residents

In addition to generating an understanding of demographic and occupational information, the 2020 Commuter Survey also solicited information from commuters about their commute patterns and experiences commuting for work. The sub-populations of commuters shown in Figure 2 on page 5 are compared to identify trends or differences in commute destination, commute length and time, and mode of transit.

The data obtained allowed the research team to examine the types of experiences commuters confront daily while traveling for work. This insight allows for increased clarity as to how commuting impacts quality of life. Key findings across all these domains include:

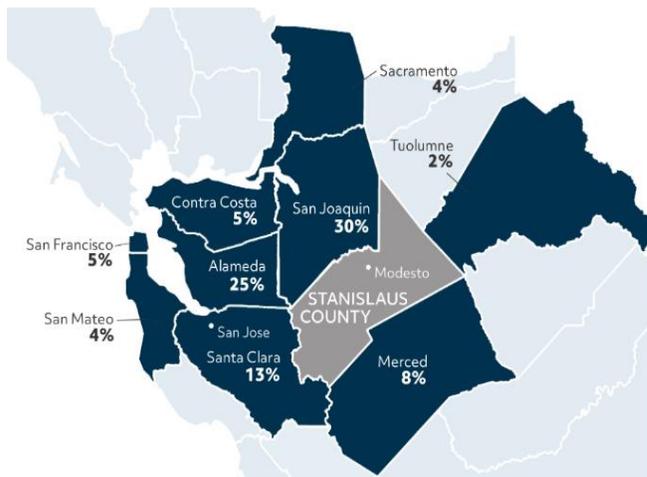
- 30% of Out-of-County commuters traveled to San Joaquin County, the most common commute destination.
- 53% of Out-of-County commuters traveled to one of the counties in the Bay Area region, mainly to Alameda or Santa Clara Counties, and were traveling farther for work on average compared to commuters in the past.
- 49% of Out-of-County commutes originate in Modesto, more than any other city in Stanislaus County.
- The average one-way Out-of-County commute was 63 miles in distance, 100 minutes in duration, and cost almost twice as much compared to commuting locally.
- 92% of Out-of-County commuters travel by driving alone because it is the most efficient form of transit for their commutes.
- Residents who travel long distances for work experienced more negative impacts on quality of life and perceived sense of safety than those commuting shorter distances.
- The majority of Out-of-County commuters reported that their commute has negative impacts on time spent with family, time to pursue their own interests, health, and sleep.



**Finding 5. 30% of Out-of-County commuters traveled to San Joaquin County, the most common commute destination.**

San Joaquin County is the most common Out-of-County commute destination for Stanislaus County residents, accounting for 30% of all Out-of-County commute destinations. Given its proximity to Stanislaus County, it is likely that San Joaquin County has always been a major commute destination for Stanislaus County residents.<sup>37</sup> Other top county destination for commuters traveling out of Stanislaus include Alameda [25%], Santa Clara [13%], Merced [8%], San Francisco, and Contra Costa [5% each]. Figure 6 provides a map of top commuter destinations by county and Table 8 below provides a list of the top ten destination counties for all commuters traveling out of Stanislaus County and, as well. A complete list of all destination counties is included in Appendix G.

**Figure 6. Percentage of Stanislaus County out-of-County commuters traveling to destination counties for work**



**Table 8. Top 10 destination counties for all commuters traveling out of Stanislaus County**

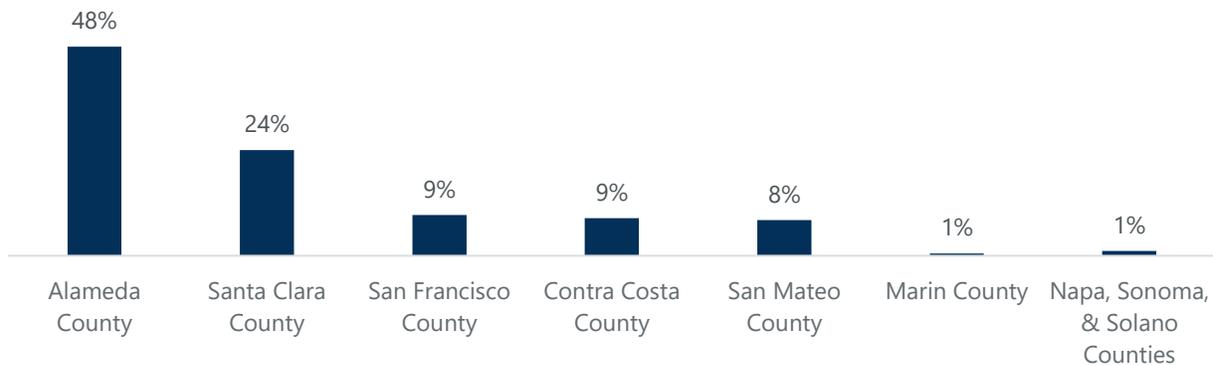
Destination County	% Out-of-County Commuters [n=1,464]
San Joaquin County	30%
Alameda County	25%
Santa Clara County	13%
Merced County	8%
San Francisco County	5%
Contra Costa County	5%
San Mateo County	4%
Sacramento County	4%
Tuolumne County	2%
Fresno County	1%
All other destinations	4%

<sup>37</sup> Comparisons of San Joaquin County: A commute destination cannot be made between the 2020 Commuter Survey and the 2000 and 2006 surveys. The 2000 and 2006 surveys focused on commuters going over Altamont Pass on Interstate 580 and did not include San Joaquin County as an option.

**Finding 6. 53% of Out-of-County commuters traveled to one of the counties in the Bay Area region and were traveling farther for work on average compared to commuters in the past.**

Today, Stanislaus County commuters are traveling greater distances within the Bay Area Region and commuting for longer amounts of time for work than in the previous commuter surveys. Fifty-three percent of all Out-of-County commuters leaving Stanislaus County for work travel to the Bay Area region. Within the sub-group of commuters traveling to the Bay Area, 72% travel to either Alameda County or Santa Clara County, as shown in Figure 7 below.

**Figure 7. Proportion of commuters traveling to only the Bay Area region by destination county [n=774]**



In the 2000 and 2006, the most common work destination in the Bay Area was Alameda County for respectively 60% and 69% of commuters. In 2019, the percent of commuters going to Alameda County decreased to 48% of commuters, while the percent of commuters going to destinations farther in the Bay Area to Santa Clara, Contra Costa, San Mateo, and San Francisco Counties increased. This trend is likely driven by the higher average potential earnings for commuters traveling to the Bay Area and the rise in cost of living across all Bay Area counties [explored in more detail in the “Stanislaus County Current Workforce and Economic Trends” section of this report]. See Table 9 for an overview of commute trends for individuals traveling to the Bay Area region.



**Table 9. Commute trends for commuters traveling to the Bay Area for work**

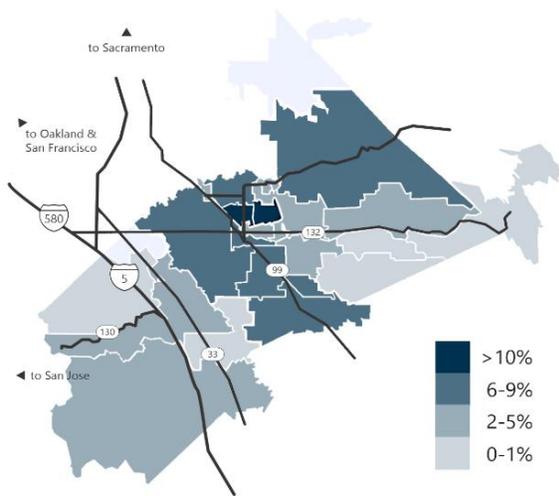
Trip Destination	2000	2006	2020	20-Year Trend
Alameda County	60%	69%	48%	
Santa Clara County	22%	15%	24%	
Contra Costa County	8%	7%	9%	
San Mateo County	3%	3%	8%	
San Francisco County	3%	3%	9%	

Of the Out-of-County commuters surveyed, approximately half [49%] utilize I-580 for their commute, and about one-third [32%] travel through the Altamont Pass five or more days in a typical week. Additionally, Out-of-County commuters reported utilizing routes such as I-680 [22%], I-880 [14%], SR-152 [5%], and “other” [10%] to get to their jobs.

**Finding 7. 49% of Out-of-County commutes originate in Modesto, more than any other city in Stanislaus County.**

Most Out-of-County commuters lived in Modesto [49%], while others lived in Turlock [12%], Ceres [8%], Patterson [7%], and Riverbank [4%], as seen geographically in Figure 8 and listed in Table 10, as well. As Modesto is the largest population center in the County, it is not surprising that most Out-of-County commuters are from Modesto by such a wide margin as compared to the other cities. See Appendix H for a complete list of cities where commuters traveling Out-of-County for work begin their trip.

**Figure 8. Percentage of Out-of-County commuters by zip code**



**Table 10. Top 5 cities where commuters traveling Out-of-County for work start their trips**

City of Commute Origin	2000 Survey % Bay Area Commuters [n=997]	2020 Survey % Out-of-County Commuters [n=1,464]
Modesto	52%	49%
Turlock	N/A	12%
Ceres	5%	8%
Patterson	13%	7%
Riverbank	4%	4%

Commuter starting destinations have changed slightly over the past the 20 years. The one exception is the percentage of commuters that began their commute in Patterson, CA. which has decreased by about half since 2000. This is likely related to the rapid population growth experienced in the City of Patterson over the past 20 years, which in 2000 was 11,606 and is estimated to be 22,524 as of 2019.<sup>38</sup>

<sup>38</sup> U.S. Census 2020, Census of Population and Housing.

**Finding 8. The average one-way Out-of-County commute was 63 miles in distance, 100 minutes in duration, and cost almost twice as much compared to commuting locally.**

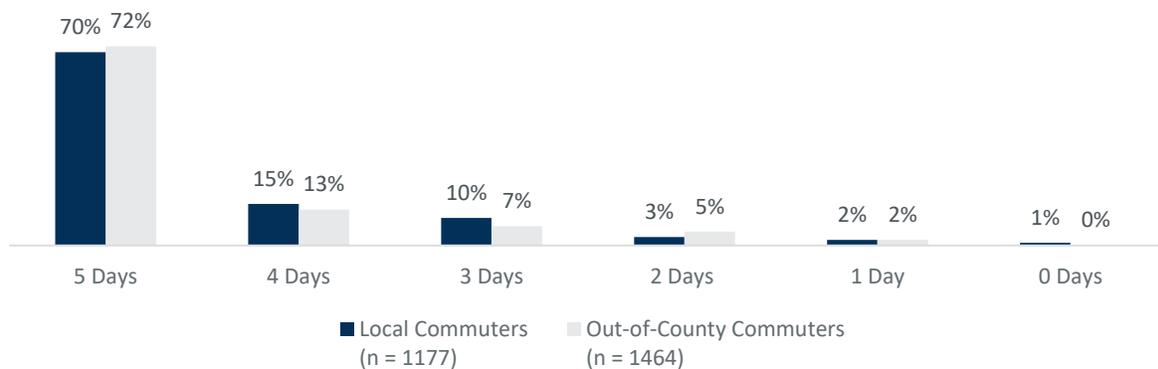
Stanislaus County residents who travelled to work outside the County have an extensive commute compared to residents who work within the County. The average trip for commuters traveling outside Stanislaus County for work is 63 miles and an average 1 hour and 40 minutes each way. Furthermore, Out-of-County commuters spend about twice as much on commute costs compared to residents who work within Stanislaus County [\$106 vs. \$55 respectively]. Table 11 provides commute characteristics by commute destination below.

**Table 11. Commute trip experience, Out-of-County commuters vs. local commuters**

Commuter Characteristic	Out-of-County Commuters	Local Commuters
Average distance traveled [one-way]	63 miles	15 miles
Average commute time [min]	100 min	33 min
Commuter cost [per week]	\$106	\$55

In addition to having long commutes, most Stanislaus County commuters make the trip to and from work five days a week. Both local and Out-of-County commuters traveled to work a similar number of days each week, with 72% of Out-of-County and 70% of local commuters reporting commuting to work five days. Despite the higher costs, time, and distances associated with Out-of-County work destinations, Out-of-County commuters are slightly more likely than local commuters to commute all five days of the typical work week.

**Figure 9. Commute trips per week, Out-of-County commuters vs. local commuters**



About a third of Stanislaus County commuters report working from home on a regular weekly basis. Among Out-of-County commuters, 33% reported working from home one or more days a week. For local commuters, slightly less reported [30%] working from home one or more days a week.

## Finding 9. 92% of Out-of-County commuters travel by driving alone because it is the most efficient form of transit for their commutes.

Out-of-County commuters reported that they travel for work mainly by driving alone [92%] and a smaller proportion of commuters travel by carpooling or vanpooling [13%], train [5%], company shuttle or bus [2%], or some other travel mode [2%]. Additionally, 81% of Out-of-County commuters selected driving as their only mode of transit. Table 12 below provides a more complete comparison of commute modes of transit by commute destination. According to interviews with commuters, most forms of public transit or carpooling are inaccessible or too inconvenient compared to driving alone. Commutes that do rely on public transit typically consist of multiple modes of transit [e.g., bus and train] and several transfer points in order to arrive at their final destination. Commuters who relied on public transit also stated their commutes took longer than if they chose to drive alone.

**Table 12. Commute mode of transit for commuters traveling Out-of-County for work by commute destination<sup>39</sup>**

Commute Mode of Transit	All Out-of-County [n=1464]	Bay Area [n=774]	Non-Bay Area [n=690]
Company Shuttle or Bus	2%	3%	1%
Drive	92%	88%	96%
Carpool	13%	17%	8%
Train	5%	8%	1%
Other	2%	3%	1%

Trends regarding commute mode of transit have changed very little in the past 20 years for commuters traveling to the Bay Area for work. Driving decreased only by 2% since 2000 [88% vs. 90%] and commuting by bus and train have increased proportionally by 1% each. See Table 13 for mode of transit trends in the past 20 years.

**Table 13. Commute mode of transit trends for commuters traveling to the Bay Area for work**

Commute Mode of Transit	2000 <sup>40</sup>	2020	20-Year Trend
Bus	2%	3%	
Train	7%	8%	
Drive	90%	88%	

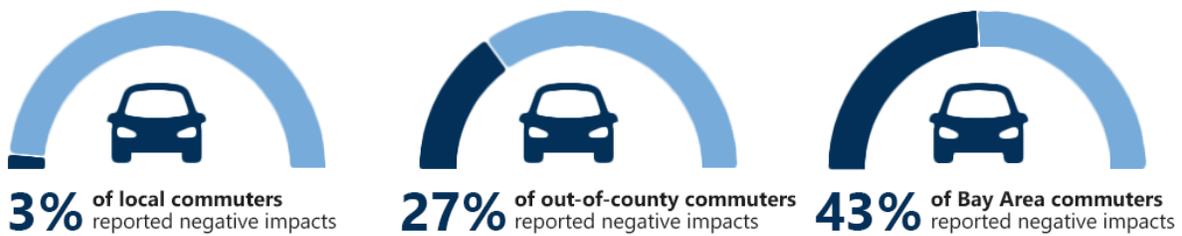
<sup>39</sup> Survey respondents were asked to select all modes of transit they use for their commute. The percentages in this table reflect the number of commuters that selected each mode of transit out of the total number of respondents in each group.

<sup>40</sup> Modes of transportation were disaggregated from the 2000 survey report to reflect modes of transportation of commuters from Stanislaus County.

**Finding 10. Residents who travel long distances for work experienced more negative impacts on quality of life and perceived sense of safety than those commuting shorter distances.**

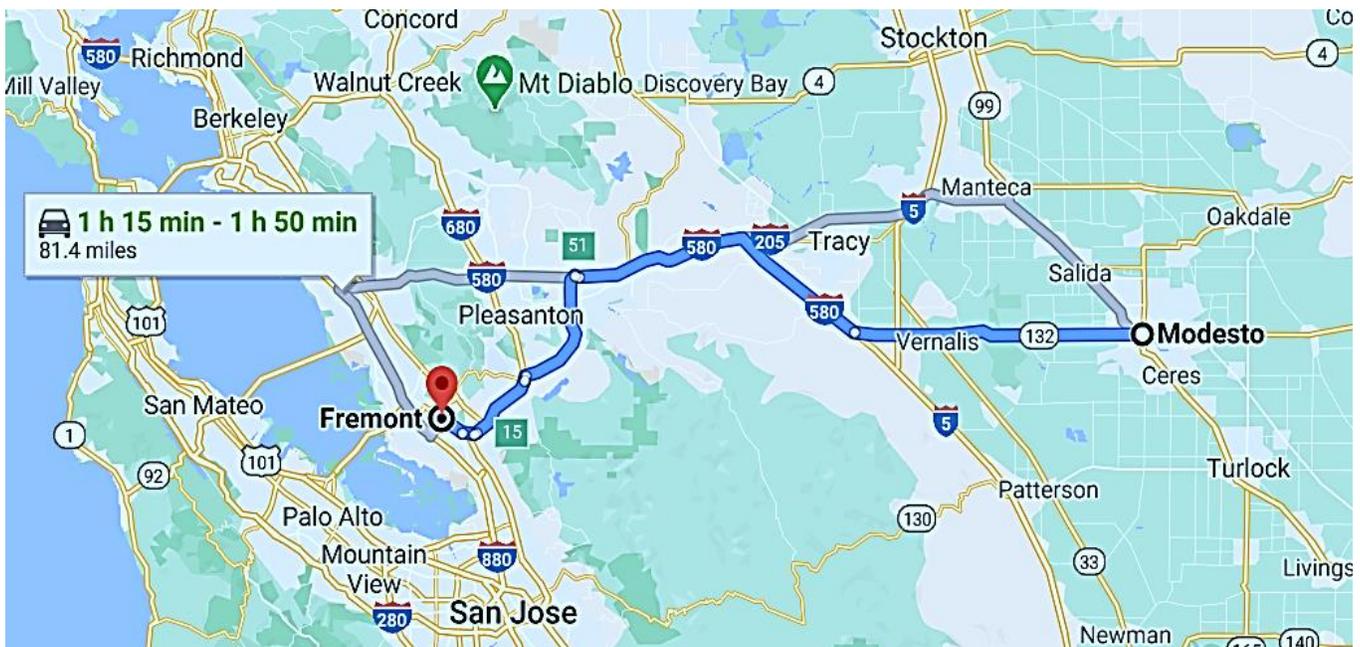
Compared to local commuters, Stanislaus County residents who travel outside of Stanislaus County for work described their work commute as having a lot of negative impacts on their personal or family life. The longer the commute, the more negative impacts commuters reported. Forty-three percent of Bay Area commuters reported negative impacts on their quality of life from commuting compared to only three percent of local commuters.

**Figure 10. Percent of commuters reporting negative impact from commute**



*“My sister commutes to Fremont. I don’t get to see her. My dad wakes up at 3:00 AM and travels. My brother doesn’t get to spend time with us.”*

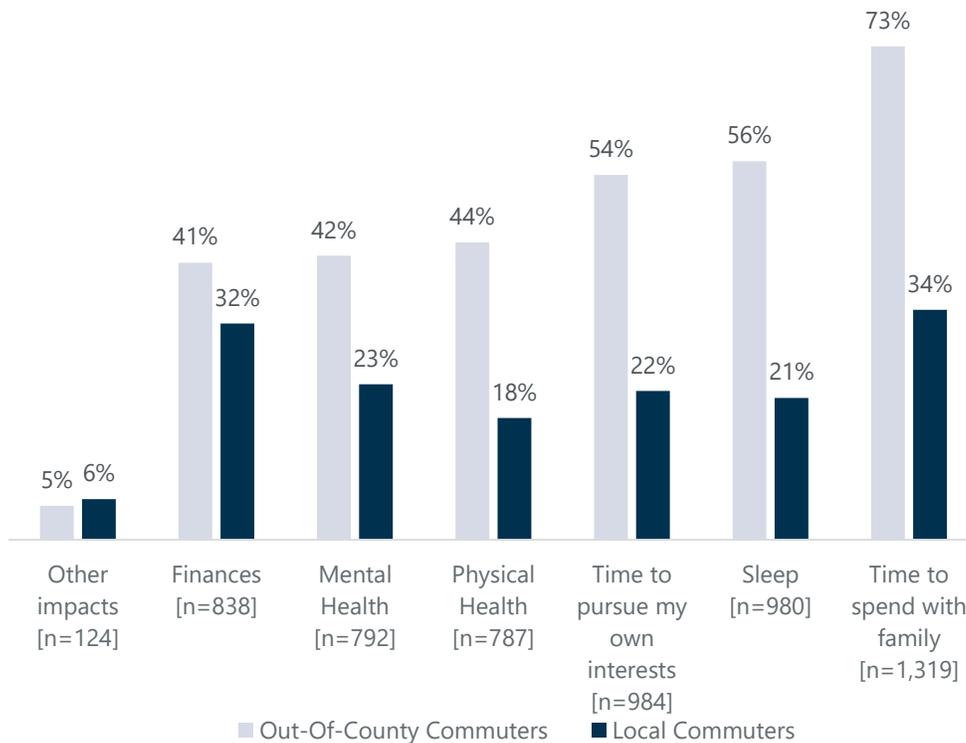
– Survey Respondent



### Finding 11. The majority of Out-of-County commuters reported that their commute has negative impacts on time spent with family, time to pursue their own interests, health, and sleep.

Compared to local commuters, Out-of-County commuters reported a significantly higher level of negative consequences on their quality of life due to their commute. Figure 11 below provides a comparison of how Out-of-County and local commuters rated different quality of life factors as negatively impacted by their commute. Commuters who travel outside of Stanislaus County for work indicated a higher proportion of negative impacts on their time to spend with family [73%], sleep [56%], time to pursue their own interests [54%], physical health [44%], mental health [42%], and finances [41%] compared to local commuters.

**Figure 11. Proportion of commuters who indicated negative quality of life impacts due to their commute, by commute destination**



In addition to impacts on quality of life, many commuters reported other concerns during their interviews. Concerns were related to their personal safety due to poor driving conditions and reckless driving behavior of other drivers. Commuters reported an increase in traffic, car accidents, and drivers' stress levels during their commutes to work over the past few years, indicating that it is the result of more people moving to the Central Valley and still commuting to the Bay Area for higher-paying jobs.

Overall, survey respondents reported frustration and dissatisfaction with their long commute and the negative impacts it has on them and their families. Despite negative impacts of a long commute, many residents perceive limited alternatives and have accepted a long commute as a part of life.

## Overview: Willingness to Work Closer to Home

In addition to understanding the current profile of commuters, the commuter survey sought to assess how individuals respond to the idea of accepting comparable employment closer to home. Findings 12 through 14 explore the willingness of commuters to take a similar job closer to home and what level of compensation and other incentives would help them to make that decision. Willingness to work closer to home is one of the key criteria to determine what types of commuters to attract to local job opportunities. Key findings regarding willingness to work closer to home include:

- 83% of Out-of-County commuters and 91% of Bay Area commuters indicated they would be willing to take the same or a similar job closer to home, regardless of their industry.
- 77% of Out-of-County commuters are willing to change to a job closer to home for the same or slightly less than what they are currently earning.
- Certain employer benefits such as insurance, professional development, and workplace culture of diversity and equality, may offset the need for a salary increase for an Out-of-County commuter to take a job closer to home.

This information in the next set of findings is critical to building strategies to encourage local talent to work locally and attract businesses to set up operations in Stanislaus County.

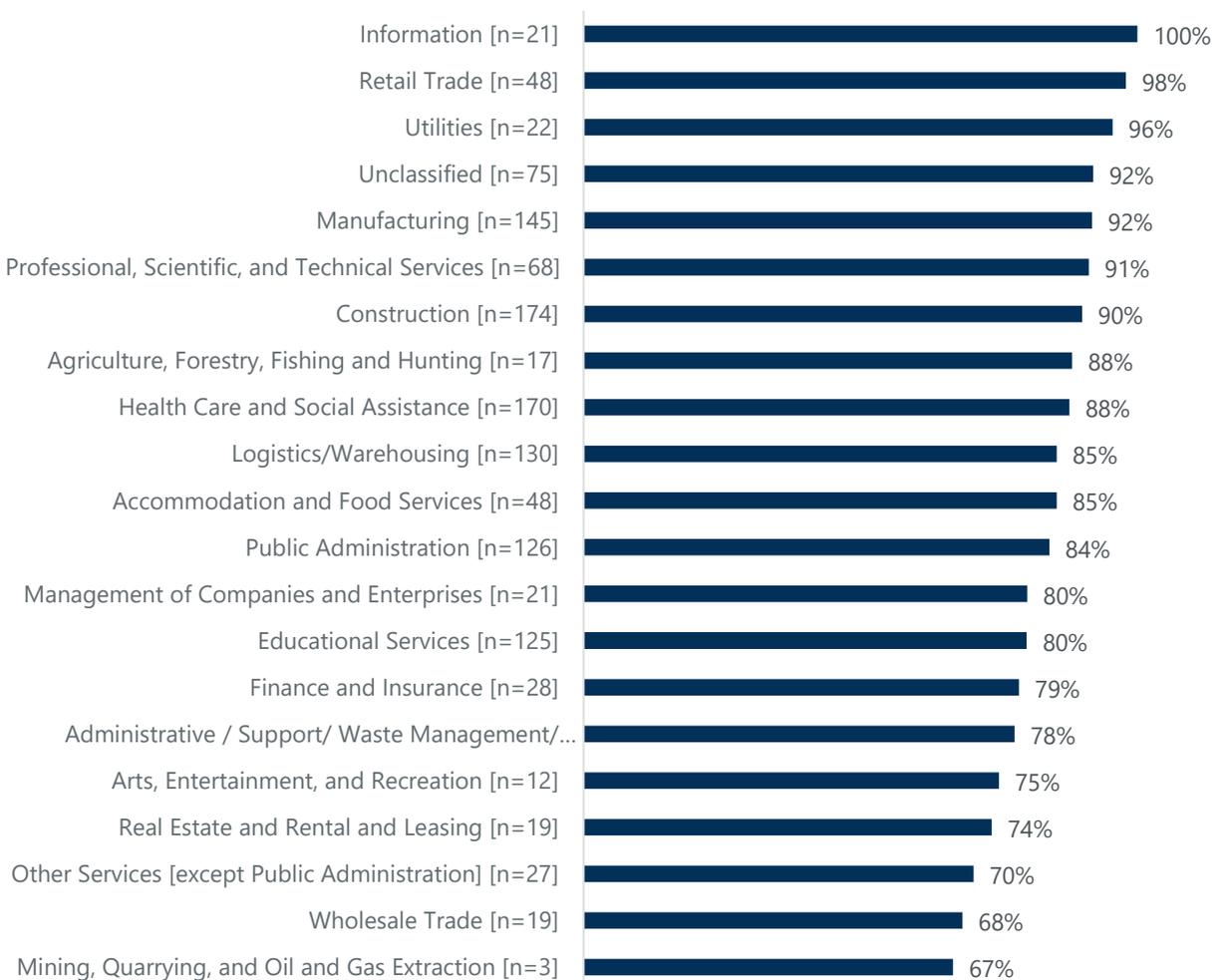
*“These commutes just to survive are ridiculous. I can work in higher paid areas but can't afford to live there. Something needs to change so everyone is not killing ourselves just to survive.”*

– Stanislaus County resident

## Finding 12. 83% of Out-of-County commuters indicated they would be willing to take the same or a similar job closer to home, regardless of their industry.

Most Out-of-County commuters [83%] reported that they would be willing to take the same or similar job closer to home if it were available. This willingness was even more accentuated among commuters who travel to the Bay Area region specifically, with 91% of commuters who reported a willingness to switch jobs closer to home. Although there were some differences in willingness to change jobs across occupations and industries, the majority of commuters across all industries expressed a willingness to change jobs, and there were no significant trends that indicated a particular occupation or industry being more willing to change jobs than the others. In Figure 12 below, each industry is ranked from the highest proportion of commuters willing to relocate to a job closer to home to the least number of willing commuters. The top five industries with the highest proportion of Out-of-County commuters willing to relocate include Information [100%]; Retail Trade [98%]; Utilities [96%]; Manufacturing [92%]; and Professional, Scientific, and Technical Services [91%].

**Figure 12. Proportion of commuters who travel Out-of-County for work that were willing to change to a job closer to home, by industry**



**Finding 13. 77% of Out-of-County commuters are willing to change to a job closer to home for the same or slightly less than what they are currently earning.**

Across all Out-of-County commuters, more than half [51%] of commuters would accept the same salary for a similar job closer to home while others would accept less [26%] or more [23%]. Compared to trends found in the prior 2000 and 2006 studies, the overall propensity to change jobs has slightly shifted to include less people willing to take the same or lower salary. However, the overall trend suggests that most commuters would accept the same salary if they were provided the opportunity to work closer to home. Table 14 shows trends for salary requirements needed to change jobs for Out-of-County commuters over the past 20 years.

**Table 14. Propensity to change jobs, 2000-2020**

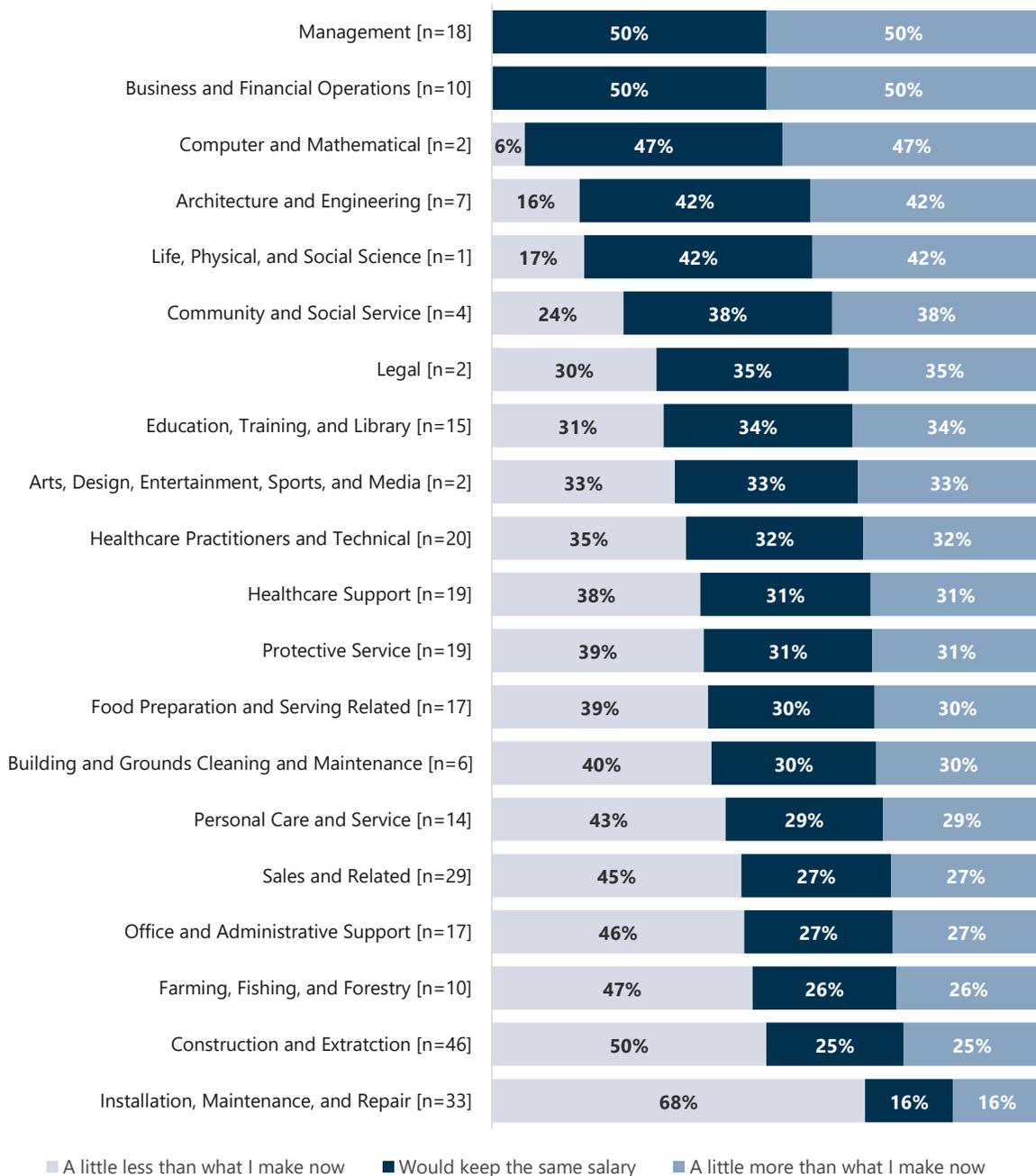
	2000	2006	2020	20-Year Trend
Slightly lower salary	26%	30%	26%	
Current salary	63%	59%	51%	
More than current salary	10%	8%	23%	

*“It’s terrible seeing so many wasting their lives on the road because they cannot make it on wages in Stanislaus County.”*

– Stanislaus County resident

Commuters who work in Installation, Maintenance, and Repair [68%], and Construction and Extract [50%] occupations were more likely to indicate willingness to change to a job closer to home for “a little less” than they are making now compared to commuters in other occupations. Overall, some Out-of-County commuters from all but two occupation categories indicated they would be willing to earn less income to relocate their job closer to home if it were available. All occupations listed in Figure 13 show the proportion of Out-of-County commuters by occupation and their desired change in salary to transition to a job closer to home.

**Figure 13. Proportion of Out-of-County commuters indicating salary change needed to move/switch/transition to a job closer to home, by occupation**



**Finding 14. Certain employer benefits such as insurance, professional development, and a workplace culture of diversity and equality, may offset some need for a salary increase in order for an Out-of-County commuter to take a job closer to home.**

The choice to commute to Out-of-County destinations for work requires a large investment of a worker's time, energy, and other resources. However, commuters often noted that the sacrifice was necessary due to the difference in the labor markets and economy in other regions. Commuters who participated in telephone interviews indicated several factors in addition to salary, listed in Figure 14 below, that would influence their decision to switch to a job closer to home.

**Figure 14. Summary of factors Out-of-County commuters listed that would influence their decision to take a job closer to home**



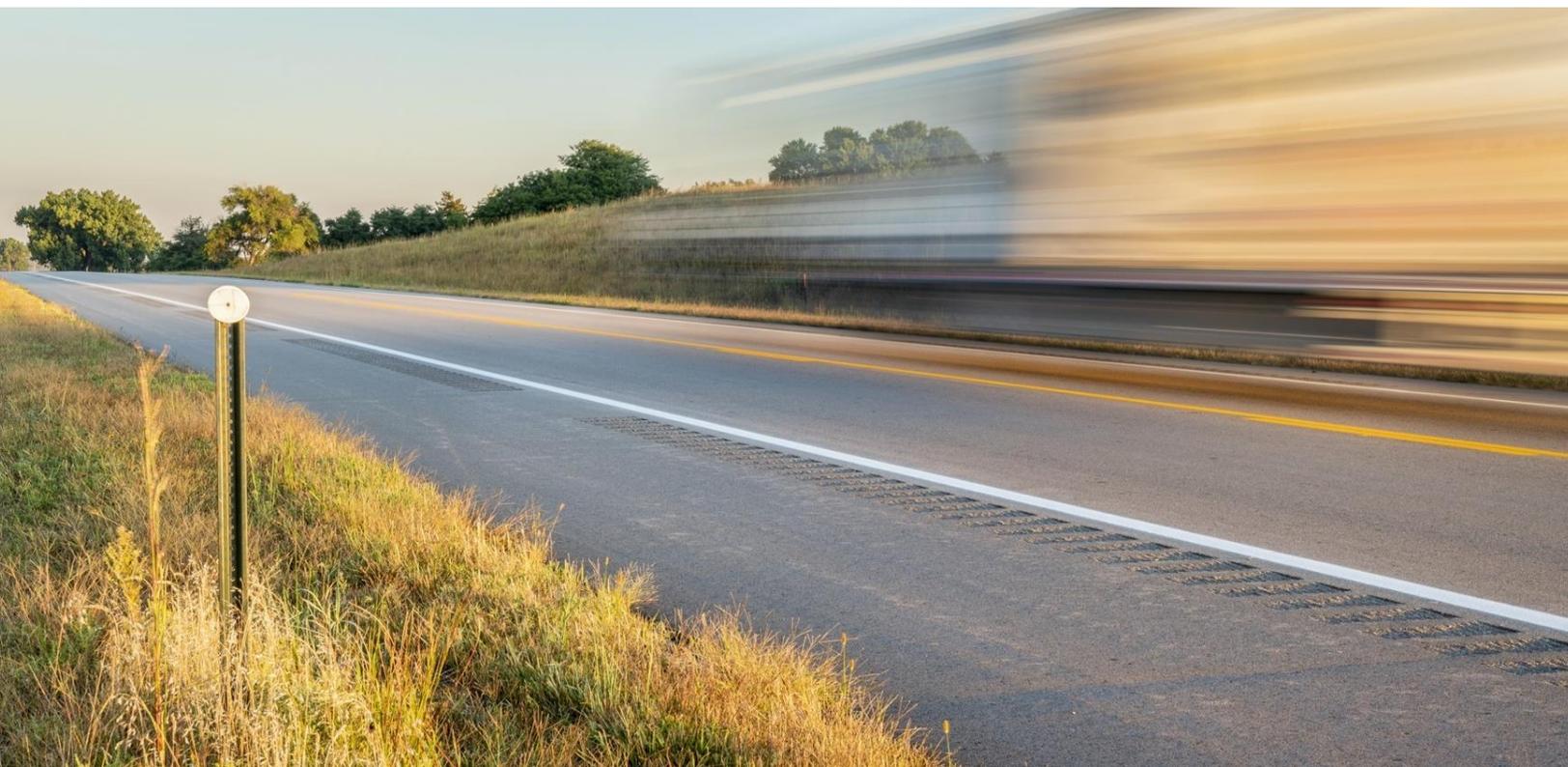
Despite their willingness to change jobs, commuters reported the lack of opportunity and comparable compensation as their main barriers to switching to a job closer to home. Specifically, commuters reported the following key beliefs around prospects in Stanislaus County:

- Lack of job opportunities close to home, especially for those working in the Information [Tech] industry.
- Concern that wages will not improve regardless of new job opportunities that become available to them.

# Commuter Assessment

## KEY FINDINGS REVIEW

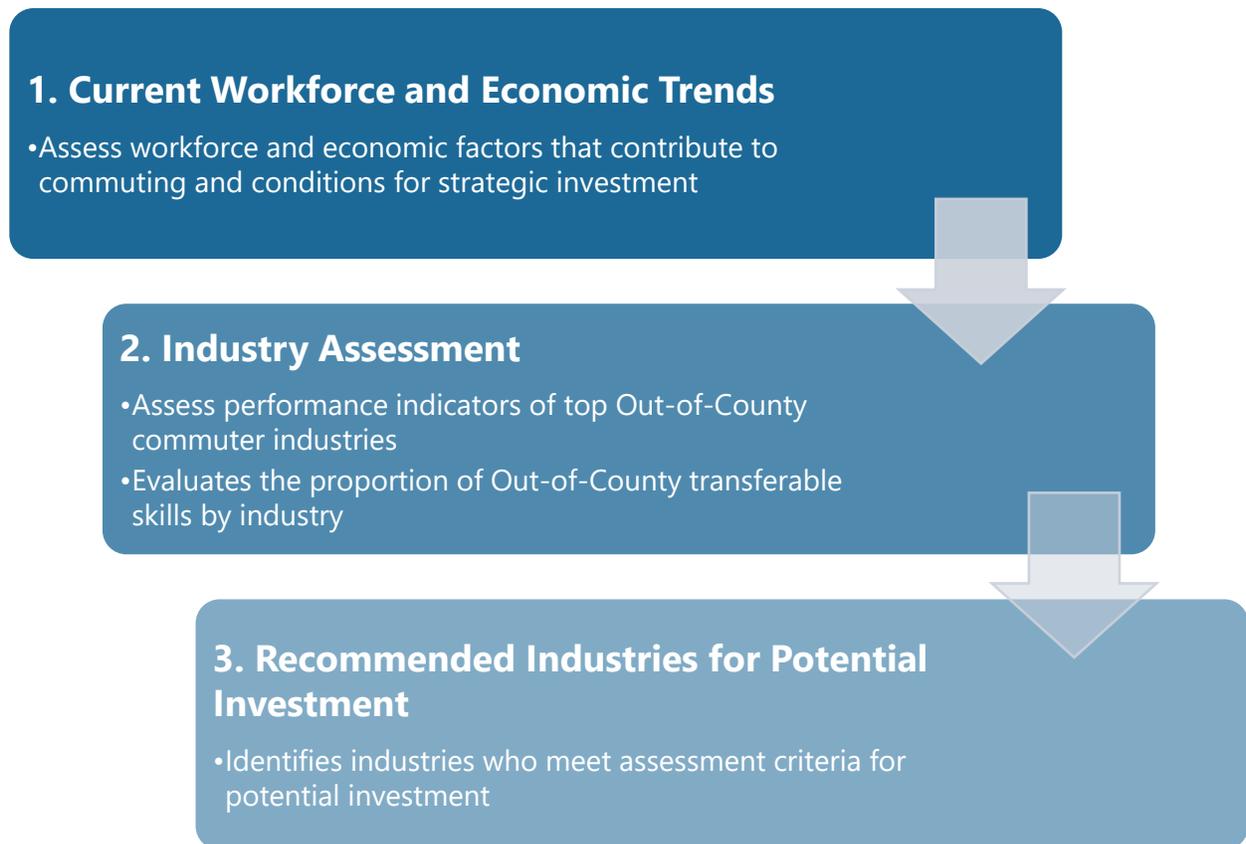
- 53% of Out-of-County commuters **travel from Stanislaus County to the Bay Area** region, mainly to Alameda or Santa Clara Counties, for work.
- The demand for **more workers in the Bay Area Construction industry** is the driving force behind the shifting characteristics of the average commuter profile over the last 20 years.
- Commuters traveling to the Bay Area for work are **earning on average \$35,700 more per year** compared to people commuting locally within Stanislaus County.
- 77% of Out-of-County commuters are **willing to change to a job closer to home for the same or slightly less** than what they are currently earning.



## Stanislaus County Workforce and Economic Opportunities

The second component of the *2020 Commuter Study* is the identification of opportunities where the commuter population can be leveraged to strengthen the local workforce and economy in Stanislaus County. The research team reviewed secondary data sources, mainly from JobsEQ®, to establish a baseline understanding for how Stanislaus County compares to other regions for factors such as un/employment, cost of living, wages, and job creation. “Commuter Assessment” data was then used to identify top industries to assess for potential to hire commuters willing to relocate to a job closer to home, while also contributing to the diversification and improvement of the local economy. The results of these analyses inform the research team’s recommendations for potential industry investments. The approach for the “Stanislaus County Workforce and Economic Opportunities” portion of the report is summarized in Figure 15.

Figure 15. Stanislaus County workforce and economic opportunities overview





## Stanislaus County Current Workforce and Economic Trends

Various workforce and economic factors influence Stanislaus County residents' decisions to seek employment outside of the County. The following section examines the factors that contribute to an environment conducive to commuting and the opportunities simultaneously created for strategic improvements locally. Specifically, the topics researched include:

- **Differences in wages and cost of living** across the Northern California megaregion [as designated by the U.S. Regional Planning Association] are discussed as a factor that influences Stanislaus County residents to work outside of the County.
- Historic trends in **employment and unemployment**.
- The **industry and occupation characteristics** of the Stanislaus County labor force.

### Key Findings:

- Modesto is home to the second greatest share of super-commuters in the U.S.
- Differences in wages and cost of living are the primary factors influencing commute trends of Stanislaus County residents.
- Economic activity in Stanislaus County mirrors, but lags behind State and National indicators.
- Workforce trends demonstrate increasing concentration of employment within fewer industries, based on population aging and challenges increasing education attainment.

## **Finding 15. Modesto is home to the second greatest share of super-commuters in the U.S.**

Stanislaus County's position within the economy and geography of Northern California has fostered a sizable population of out-commuters, including a "super-commuter" population of individuals who travel more than 50 miles or for longer than 90 minutes to get to work. In a national study of super-commuters in 2013, a U.S. Census Bureau white paper identified the San Francisco-Oakland-Fremont Metro area as the U.S. metro with the highest mean travel time, as well as the highest commute distance, for full-time workers.<sup>41</sup> According to the white paper, the number of super-commuters to San Francisco more than doubled between 2002 and 2013; by 2013, at least 2% of workers in the San Francisco/Oakland/Fremont region experienced commutes that were either 50 miles or more or took 90 minutes or longer.

Stanislaus County and the City of Modesto in particular, are popular locations of residence for super-commuters to the Bay Area. As the Stanislaus County Seat and the County's most populous city, Modesto has emerged as one of the U.S. cities that has experienced the greatest growth in super-commuters. In a 2016 analysis of census data, ApartmentList.com found that the percent of super-commuter residents in Modesto grew from 4.9% in 2005 to 7.3% in 2016. **Today, a total of 15,335 residents in Modesto commute out of the County for work, making Modesto only second to Stockton, CA as one of the cities with the greatest share of super-commuters across the United States.**<sup>42</sup>

In addition to protracted driving distance, factors such as highway routes, weather, accidents, and construction exacerbate traffic and commute times for commuters. As a result, workers who drive to job destinations beyond Stanislaus County can experience a one-way commute time ranging from one to three hours. For instance, a commuter departing in their car from Modesto to San Francisco, Sacramento, or San Jose on a weekday can expect to take at least one hour and ten minutes to arrive at their destination.

Across interviews with commuters, there was a general consensus that traffic out of Stanislaus County has worsened over the years. During the morning rush hour, mapping tools indicate that drivers can experience a commute of up to three hours driving from Modesto to San Francisco or San Jose [see Table 15]. However, in interviews, commuters suggested that typical driving times may be longer than these estimates.

### **Who is a 'super-commuter'?**

*Any individual who travels more than 50 miles or for longer than 90 minutes to get to work.*

<sup>41</sup> Rapino, M.A., Fields A.K.. [2013].

<sup>42</sup> Rise of the Super Commuters. <https://www.apartmentlist.com/rentonomics/increase-in-long-super-commutes/>

**Table 15. Estimated driving commute times from Modesto on a given Tuesday<sup>43</sup>**

Destination	Highways	Distance in Miles		At 8:00 AM	At 1:00 PM	At 5:00 PM
San Francisco	via I-580	89.3	Min	1 hr 50 min	1 hr 25 min	1 hr 40 min
			Max	2 hr 50 min	2 hr 0 min	2 hr 20 min
	via CA-4	106	Min	2hr 0 min	1 hr 25 min	2 hr 0 min
			Max	3 hr 0 min	2 hr 0 min	2 hr 40 min
Sacramento	via CA-99 N	75.4	Min	1 hr 10 min	1 hr 10 min	1 hr 15 min
			Max	1 hr 40 min	1 hr 40 min	1 hr 40 min
	via I-5 N	80.8	Min	1 hr 20 min	1 hr 15 min	1 hr 25 min
			Max	2 hr 0 min	1 hr 40 min	2 hr 0 min
San Jose	via CA-132 W, I-580 W and I-680 S	81.8	Min	1 hr 50 min	1 hr 20 min	1 hr 30 min
			Max	2 hr 40 min	2 hr 0 min	2 hr 10 min
	via I-580 W and I-880 S	95.4	Min	1 hr 50 min	1 hr 30 min	1 hr 40 min
			Max	2 hr 50 min	2 hr 10 min	2 hr 20 min

*“As time goes on there's more traffic. I used to take shortcuts but now everyone has maps and finds the fastest way. When I first started I could leave at 5:30, and now I have to be out no later than 4:30. I used to not worry about traffic on 5 and now there's traffic before I'm even on the freeway.”*

**– Stanislaus County resident**

<sup>43</sup> Travel time data developed using simulations in Google Maps.

**Finding 16. Differences in wages and cost of living are the primary factors influencing commute trends of Stanislaus County residents.**

The literature points to several factors that led to the rise of super-commuters, including the changing structure of the workplace, advances in telecommunications, the integration of multiple cities and job hubs, sprawling development, and the disparate cost of living and wage levels across regional terrains.<sup>44</sup> While these and many other factors impact commuters, this section focuses on the disparate cost of living throughout the Northern California region.

Thriving job markets in adjacent megaregions, coupled with the rising cost of housing, intensify differences in the cost of living between Stanislaus County and surrounding areas. Table 16 provides an overview of various measures for earnings in regions including Stanislaus County, the Bay Area, the State of California, and the United States, underscoring the competitive differences among these regions. These differences are examined to highlight the impact of cost of living and wage differentials for Stanislaus residents to commute for work outside of the County.

*“It would sure be nice if Stanislaus County was competitive with job wages as the Bay Area is, then I would not have to sacrifice my health, mental state and family time in order to commute 90 miles a day in order to live here.”*

– Survey Respondent

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<sup>44</sup> Treatment and review of this evolution in context of the Bay Area is provided by Cervero, R., Landis, J. (1992). Suburbanization of jobs and the journey to work: A submarket analysis of commuting in the San Francisco Bay Area. <https://onlinelibrary.wiley.com/doi/abs/10.1002/atr.5670260305>

Table 16. Comparison of earnings between Stanislaus County, the Bay Area, the State of California, and the United States

	Cost of Living Indicators		Earnings Indicators			Cost of Living Adjustments		Purchasing Power based on Cost of Living Adjustments <sup>45</sup>		
	Median House Value <sup>46</sup>	Median Household Income	Annual Average Industry Salary	Average Annual Occupation Wage <sup>47</sup>	Median Annual Occupation Wage <sup>48</sup>	Cost of Living Index [Base US] <sup>49</sup>	Compared to U.S. Average <sup>50</sup>	Annual Average Industry Salary	Average Annual Occupation Wage	Median Annual Occupation Wage
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[C/F]*100	[D/F]*100	[E/F]*100
Stanislaus County	\$272,400	\$57,387	\$49,309	\$48,400	\$39,600	106.4	+6.4%	\$46,343	\$45,489	\$37,218
Bay Area	\$770,456	\$100,514	\$104,512	\$70,100	\$61,500	178.6	+78.6%	\$58,517	\$39,250	\$34,434
California	\$475,900	\$71,228	\$69,322	\$58,700	\$47,400	145.5	+45.5%	\$47,644	\$40,344	\$32,577
United States	\$204,900	\$60,293	\$57,681	\$51,700	\$41,000	100	+0%	\$57,681	\$51,700	\$41,000

Source: Chmura Economics & Analytics JobsEQ, Demographic Profile

<sup>45</sup> Normalized based on U.S. purchasing power.

<sup>46</sup> Median price of owner-occupied, single-family home. American Community Survey 2014-2018.

<sup>47</sup> Based in industry data drawn from Quarterly Census of Employment and Wages [QCEW]. Under most state laws or regulations, wages include bonuses, stock options, severance pay, profit distributions, cash value of meals and lodging, tips and other gratuities, and, in some states, employer contributions to certain deferred compensation plans such as 401[k] plans.

<sup>48</sup> Based on occupation data drawn from Occupational Employment Statistics [OES]. Wages for the OES survey are straight-time, gross pay, exclusive of premium pay.

<sup>49</sup> Developed by the Council for Community and Economic Research.

<sup>50</sup> Data as of 2019 Q2, imputed by Chmura Economics & Analytics JobsEQ where necessary.

As highlighted in Table 16:

- **The median cost of housing in the Bay Area is close to three times higher than the cost of housing in Stanislaus County.** The median cost of an owner-occupied single-family home in the Bay Area is \$770,456, according to 4-year census estimates [2014-2018]; this cost of housing is nearly three times as high as a home in Stanislaus County [\$272,400].
- **The median household income in the Bay Area is close to double the household income of Stanislaus County.** Median household income reflects the income for individuals who fall within the 50<sup>th</sup> percentile of income levels for individuals who reside in a region. The median household income for Stanislaus County is \$57,387, which is nearly half of the median household income in the Bay Area [\$100,514] and below that of California [\$71,228].
- **Due to differences in cost of living, the annual average industry salary in the Bay Area generally affords Stanislaus out-commuters a greater purchasing power from wages earned outside the County.** Column F in Table 16 lists the cost of living for each region using a cost of living index developed by the Council for Community and Economic Research, enabling a comparison of the cost of living for each County relative to the U.S. as a baseline. As shown in Column G, the cost of living in the Bay Area is substantially higher than in Stanislaus County; consequently, an individual earning a wage of \$104,512 through working in the Bay Area will have greater purchasing power if they reside in Stanislaus County than if they work and reside in the Bay Area.
- **The difference between median Stanislaus County household incomes and median salaries for Stanislaus County workers also shows how much greater the earning power is in the Bay Area.** A comparison of cost of living between regions is better addressed by measures based on earnings acquired from an individual's place of work, rather than where they reside. This is because earnings based on place of residence may include wages from other regions, confounding a cross-region comparison. Columns A-E in Table 16 highlight income measures that are based on money earned by individuals working in each respective region.<sup>51</sup> The annual average industry salary for individuals who work in Stanislaus is \$49,309, compared to an annual average industry salary of \$104,512 for employees who work in the Bay Area. It is worth noting that the average annual industry salary earned in Stanislaus County is almost \$8,000 lower than the Stanislaus median household income, whereas household income and the annual average salary in the Bay Area are roughly similar. This difference is likely due to greater earnings acquired outside the Stanislaus County.

The purchasing power acquired from earning a salary in a given region may vary by the occupation. Table 17 highlights the median annual earnings in Stanislaus County and the Bay Area for different occupations, and highlights the “earning differential,” which is the additional median earnings that may be acquired by working in the Bay Area. The percent change measures the relative percent change in earnings. Occupations with the greatest wage differential include Computer and Mathematical occupations, and Management occupations. Each of these top occupations tends to attract a workforce in which 75% or more have a college degree.

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<sup>51</sup> Though industry and occupation wages are both based on place of employment [columns C and D].

**Table 17. Median annual occupation wage comparison, Bay Area and Stanislaus County [ranked in order of earning differential, % change, 2-digit Standard Occupational Classification (SOC)]<sup>52</sup>**

Occupation	Stanislaus County Median Wage	Bay Area Median Wage	Earning Differential [\$]	Earning Differential [% Change]
	[A]	[B]	[B – A]	[B – A]/[A]
Computer and Mathematical Management	\$67,600	\$115,600	\$48,000	71%
Arts, Design, Entertainment, Sports, and Media	\$84,500	\$141,500	\$57,000	67%
Legal	\$39,600	\$61,300	\$21,700	55%
Business and Financial Operations	\$81,300	\$124,300	\$43,000	53%
Construction and Extraction	\$61,200	\$87,400	\$26,200	43%
Sales and Related	\$49,300	\$68,300	\$19,000	39%
Office and Administrative Support	\$28,100	\$38,600	\$10,500	37%
Architecture and Engineering	\$35,100	\$45,600	\$10,500	30%
Life, Physical, and Social Science	\$78,900	\$101,600	\$22,700	29%
Farming, Fishing, and Forestry	\$64,900	\$82,200	\$17,300	27%
Healthcare Support	\$25,300	\$31,700	\$6,400	25%
Protective Service	\$33,600	\$41,600	\$8,000	24%
Healthcare Practitioners and Technical	\$45,500	\$56,200	\$10,700	24%
Personal Care and Service	\$90,800	\$109,500	\$18,700	21%
Food Preparation and Serving Related	\$24,300	\$29,400	\$5,100	21%
Installation, Maintenance, and Repair	\$24,600	\$29,400	\$4,800	20%
Transportation and Material Moving	\$49,000	\$58,100	\$9,100	19%
Production	\$34,200	\$40,400	\$6,200	18%
Community and Social Service	\$38,500	\$43,000	\$4,500	12%
Building and Grounds Cleaning and Maintenance	\$51,000	\$56,600	\$5,600	11%
Education, Training, and Library	\$30,700	\$33,700	\$3,000	10%
<b>Average for all occupations</b>	<b>\$59,300</b>	<b>\$58,700</b>	<b>-\$600</b>	<b>-99%</b>
	<b>\$39,600</b>	<b>\$61,500</b>	<b>\$21,900</b>	<b>55%</b>

Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

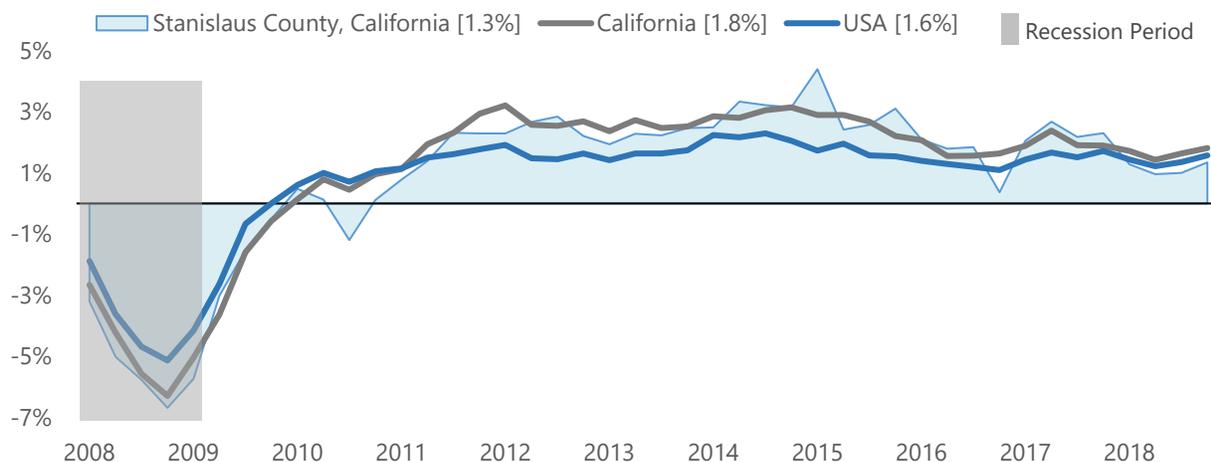
Higher average wages and high cost of living in the Bay Area, coupled with the relatively lower cost of living in Stanislaus County with a less robust job market, undoubtedly influence commuter behavior. **Given the high wages in the Bay Area, individuals may prefer to reside in Stanislaus County and commute to the Bay Area to access the higher wages even while enduring commute costs and impacts on quality of life.** The following section examines the internal dynamics of the Stanislaus County economy that also factor into commuters' decisions and experiences.

<sup>52</sup> Employment data as of 2019 Q3. Wage data are as of 2018 and represent the average for all covered employment [i.e. 50th percentile wage]. Wages are not adjusted for cost of living based on the assumption that the wages are earned by Stanislaus residents.

## Finding 17. Economic activity in Stanislaus County mirrors, but lags behind State and National indicators.

In California and nationally, overall employment has recovered after the period of job loss from the Great Recession.<sup>53</sup> During and following the last recession, employment declined at a faster pace in California, and the State lost a larger share of its employment than the nation as a whole.<sup>54</sup> Stanislaus' loss in employment during this period was especially stark. As shown in Figure 16, Stanislaus County was especially susceptible to the highs and lows of the recession when compared to the U.S. and California. Since the beginning of 2012, employment in California has increased faster than U.S. employment on a year-over-year basis.<sup>55</sup> During the period directly following the recession, Stanislaus County's employment grew at a slightly slower pace compared to the U.S. and California. Since then, employment growth in Stanislaus has mirrored California's employment growth trends.

**Figure 16. Annual percent change in employment for Stanislaus, California, and the U.S. [10-year trend]**



Source: Chmura Economics & Analytics, JobsEQ Labor and Wage Trends [as of 2019 Q3]

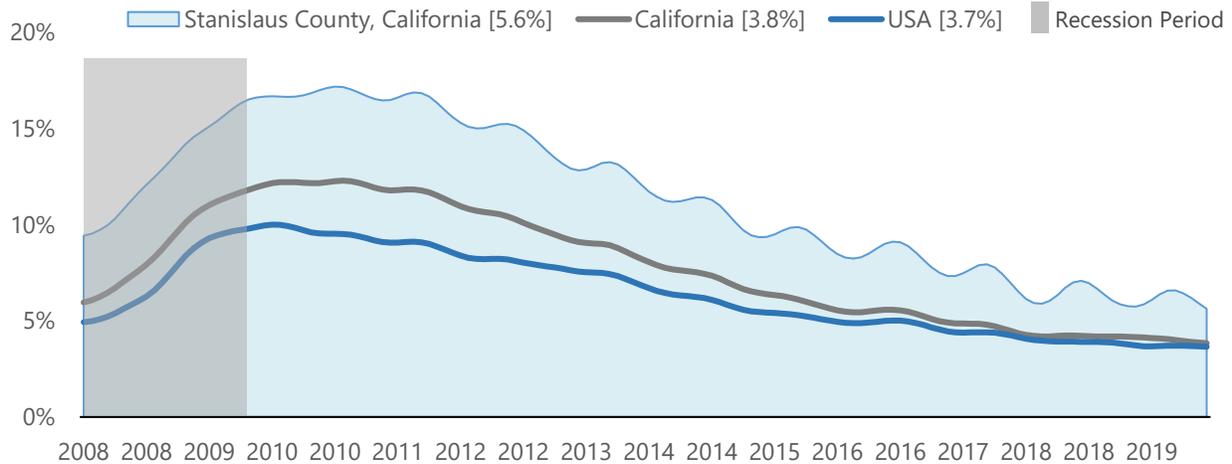
As employment increased for the County, unemployment consistently declined for Stanislaus in the past ten years. Nevertheless, Stanislaus' rate of unemployment remains consistently higher than unemployment in the U.S. and California [see Figure 17].

<sup>53</sup> The Great Recession refers to the economic downturn from 2007 to 2009 after the bursting of the U.S. housing bubble and the global financial crisis.

<sup>54</sup> Source: Chmura Economics & Analytics, JobsEQ Labor and Wage Trends [as of 2019 Q3]

<sup>55</sup> Chmura: The State of the Inland Empire Economy; <http://wp.sbcounty.gov/workforce/wp-content/uploads/sites/5/2016/11/Inland-Empire-Economy-2015Q3-2016Q2.pdf>

**Figure 17. Seasonally-adjusted unemployment rate for Stanislaus County, California, and the U.S. [10-year trend]**



Source: Chmura Economics & Analytics, *JobsEQ Labor and Wage Trends [as of 2019 Q3]*

While employment growth signals economic improvement, Stanislaus County's economic growth also relies on the local labor force and their level of participation in the workforce.<sup>56</sup> Across the U.S., labor force participation has been declining since the late 1990s and declined at an accelerated pace following the recession.<sup>57</sup> In Stanislaus County, the labor participation rate [61.4%] is slightly less than the California average [63%].<sup>58</sup> However, with 10% unemployment compared to 5% in the Bay Area, Stanislaus County may offer an untapped labor market for businesses and industries experiencing difficulty with hiring.



<sup>56</sup> The labor force includes all people classified in the civilian labor force, plus members of the U.S. Armed Forces [people on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard]. The civilian labor force consists of people classified as employed or unemployed.

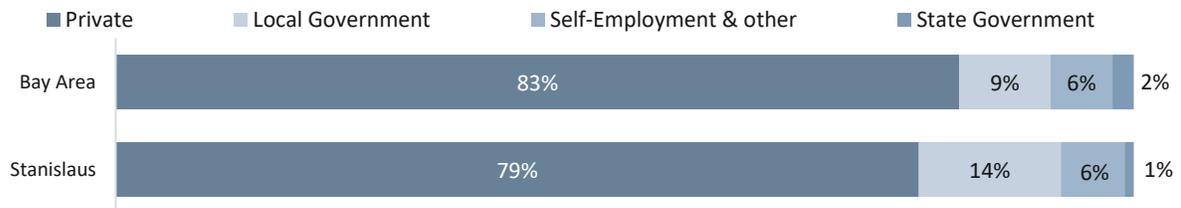
<sup>57</sup> Chmura: The State of the Inland Empire Economy; <http://wp.sbcounty.gov/workforce/wp-content/uploads/sites/5/2016/11/Inland-Empire-Economy-2015Q3-2016Q2.pdf>

<sup>58</sup> Chmura: Economic Overview - Stanislaus County, California [October 11, 2019].

## Finding 18. Workforce trends demonstrate increasing concentration of employment within fewer industries based on population aging and challenges to increasing education attainment.

Stanislaus County has seen a steady growth in the number of business enterprises since the great recession. The concentration of business ownership can be characterized by an “employment distribution,” which is based on four ownership types – state government, local government, the private sector, and self-employment. As shown in Figure 18, Stanislaus has a relatively higher share of employment in the public sector when compared to the Bay Area. Using self-employment as a proxy for entrepreneurs, a higher share of self-employed individuals within a regional industry may point to future growth.

**Figure 18. Employment distribution, by type**

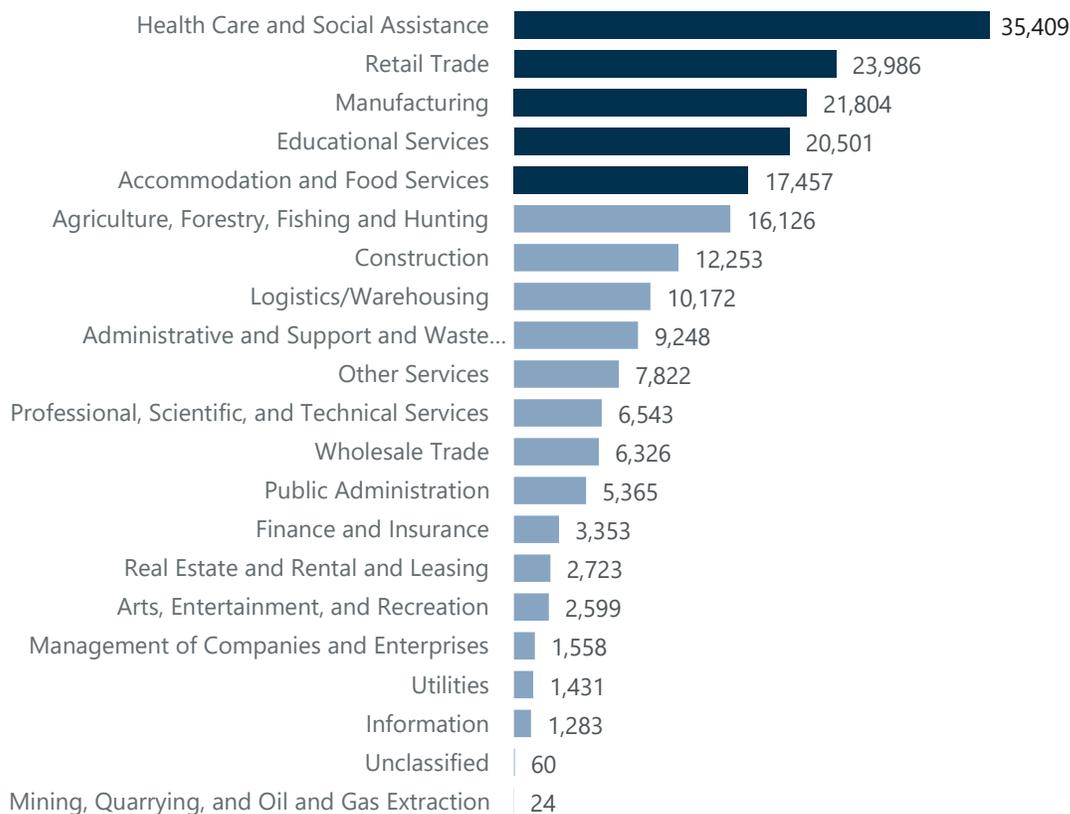


Source: Chmura Economics & Analytics [Federal employment excluded due to a low N].

An industry reflects the character of products and services that are in demand within a region, thereby shaping employment and the opportunities available to local workers, in this case, those within Stanislaus County. The Health Care and Social Assistance, Retail, and Manufacturing industries are currently the top three employers in Stanislaus County. This is followed by Education and Accommodation and Food Service industries, which also account for a large share of jobs in the County. Agriculture is a prominent industry in Stanislaus County, however in terms of employment, wages in the industry are considerably low and employment is often seasonal. Lastly, Construction and Logistics/Warehousing are industries that many commuters in Stanislaus County work in, but these industries account for a much smaller share of employment.

As depicted in Figure 19, the five industries in Stanislaus County that hire the highest number of employees comprise 48% - or close to half - of the County's labor force. Among these industries, Health Care is a particularly strong employer in the County. The Health Care and Social Assistance sector accounted for the largest share of employment in Stanislaus County in the third quarter of 2019, making up 14% of the total labor force in the region [see Figure 19].

**Figure 19. Industries in Stanislaus ranked by employment size [2-digit SOC]**

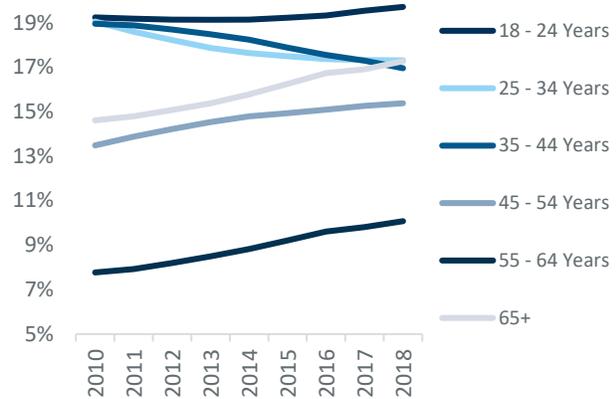


Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

The prominence of Health Care in Stanislaus County is reflective of national trends. According to the Bureau of Labor Statistics [BLS], between 2006 and 2016, 2.8 million jobs were added to the Health sector at growth rate almost seven times faster than the rest of the economy.<sup>59</sup> A major reason for the rise in the Health Care industry has been an increasing aging population creating a need for additional services, which in turn creates a demand for more health care and social assistant-type positions. Figure 18 highlights the rise in the percentage of residents that are 65 years of older in Stanislaus County.

**Figure 20. Age trends in Stanislaus County**

The population of older adults [aged 65+] has been on the rise in Stanislaus, impacting the demand for health care and social assistance.



Source: Chmura Economics & Analytics [ACS 2014-2018]

While Stanislaus County has higher percentages of individuals who are unemployed, on public benefits, or living below the Federal Poverty Level than the Bay Area and California, workforce participation is within the range of both Bay Area and the State. Similarly, educational attainment levels of Stanislaus County workers lag the National, State, and Bay Area rates for bachelor’s and post-graduate degrees, but are higher for high school diplomas and associate degrees. The prominence of associate degrees may be due to the large healthcare workforce in Stanislaus County, where many paraprofessional occupations, such as technicians, nurse’s assistants, and home health aides, only require an associate’s degree [see Table 18].

**Table 18. Worker’s educational attainment, based on place of residence**

Location	Some High School	High School Graduate	Some College	Associate’s Degree	Bachelor’s degree	Post-Graduate Degree
United States	9%	26%	18%	10%	24%	13%
California	12%	21%	19%	10%	25%	13%
Bay Area	8%	16%	16%	8%	32%	20%
Stanislaus	15%	32%	23%	10%	14%	6%

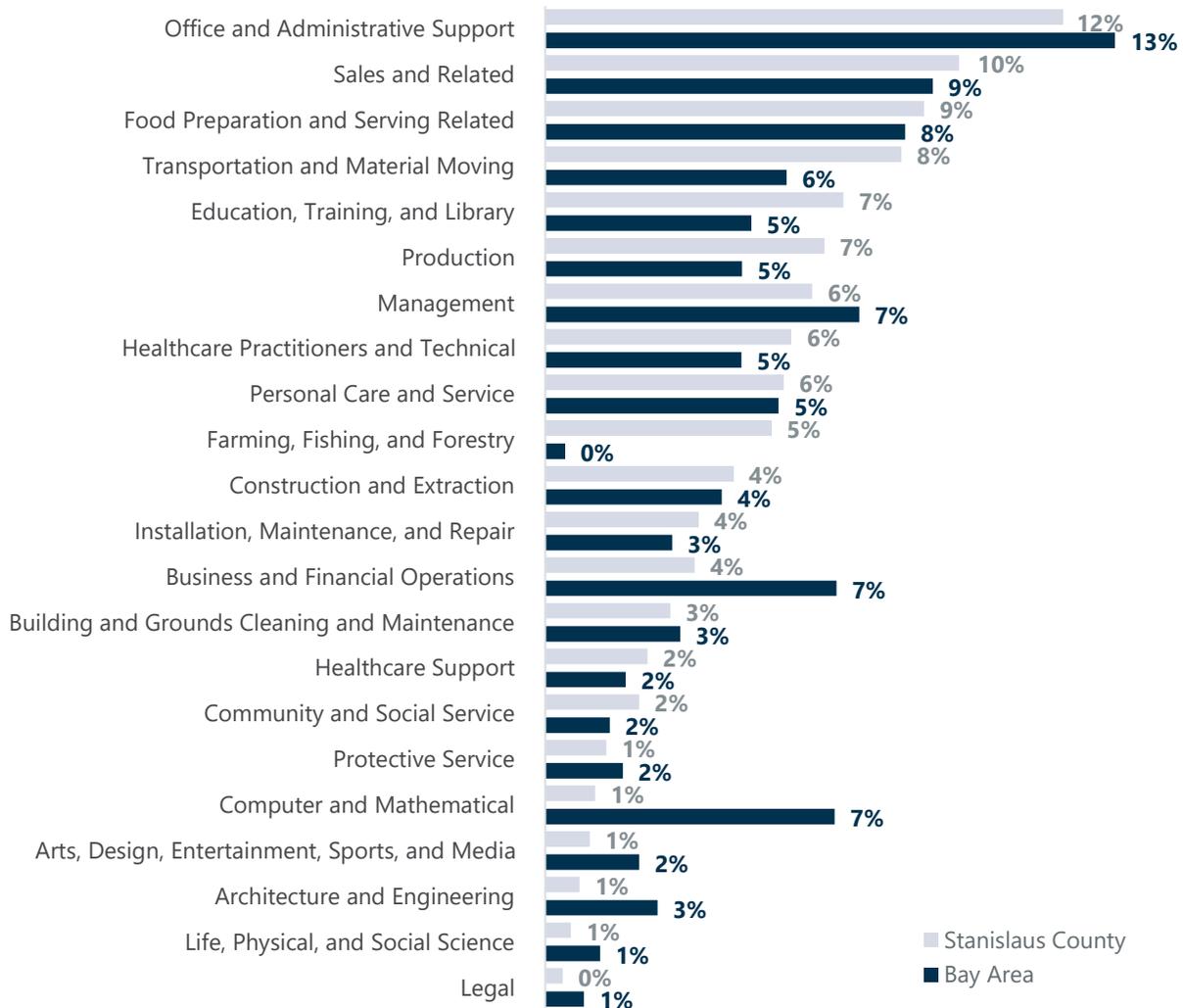
Source: Data modeled by Chmura using U.S. Census Bureau Educational Attainment data projected to 2019 Q3 along with source data from the BLS.

Those participating in the workforce are employed in a wide a range of occupations both in Stanislaus County and in the Bay Area. In general, the distribution of occupations in both regions are within the range of each other, with a few exceptions. Business and Financial Operations, and Computer and Mathematical occupations are both more common in the Bay Area than in Stanislaus County. This is likely due to the concentration of economic activity in the Bay Area creating a much larger demand for Business and Finance occupations than in Stanislaus. Computer and Mathematical occupations are likely more common in the

<sup>59</sup> <https://www.healthaffairs.org/doi/10.1377/hblog20180502.984593/full/>

Bay Area due to the concentration of technology firms and the concentration of several colleges and universities. Another disparity between the regions is found in occupations related to Farming, Fishing, and Forestry, where five percent of workers in Stanislaus County compared to less than one percent of workers in the Bay Area are employed in related occupations.

**Figure 21. Workers in Stanislaus and Bay Area as a percent of total employed [2-digit SOC,] by place of employment<sup>60</sup>**



Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

This data suggests that although they are different in size, the workforce of the Bay Area and Stanislaus County are relatively similar in terms of occupations. Should companies in the Bay Area consider relocating to Stanislaus County or lack the workforce they need in the Bay Area, both employment and occupational data suggests that there is a potentially available workforce that companies can tap into.

<sup>60</sup> Represents individuals who work in the region, but may not necessarily live in the region; Chmura Economics & Analytics, JobsEQ Occupation Snapshot [as of 2019 Q3]

## Industry Assessment

The final component of the *2020 Commuter Study* is to use a combination of key research findings about the commuter population and local economic or workforce trends to identify opportunities for SCWD to keep existing talent local and bolster the local Stanislaus community. Identifying potential opportunities requires developing a framework that incorporates key data points indicative of promising areas of investment to further explore. Industries are the focus in this analysis in order to maximize potential reach to commuters who are likely to work closer to home.<sup>61</sup> The key elements of our framework to identify industries for potential investment include assessment of the following:

- **5-year Forecasted Job Demand:** Job demand reflects the total anticipated change in employment. It is calculated using the following factors:

$$\text{Job Demand} = \text{\# of Job Exits} + \text{\# of Job Transfers} + \text{Forecasted Employment Growth}$$

- **10-year Historic Employment Growth:** Historic job growth is measured by the average job growth<sup>62</sup> based on a selected time frame. The research team measured job growth by the number of employees rather than percent in order to identify the greatest comparable net growth among Stanislaus industries.
- **5-year Forecasted Employment Growth:** Forecasted growth reflects the average annual growth rate of industries projected into the future.<sup>63</sup> This assessment criterion seeks to recommend industries that have a positive employment growth trend.
- **Commutes Out-of-County:** The percent of survey respondents that commute out of Stanislaus County for work in a particular industry out of all the commuters that responded to the survey [established in the "Commuter Assessment" portion of the report].
- **Commuter Transferable Skills:** Transferable skills are the portable qualities of workers that can be transferred from one job to another, such as communication skills, teamwork, and leadership ability, among others. The research team examined industry and occupation data to understand how the Out-of-County commuter population skillset is transferable to the industries being assessed for potential investment. The transferable skills rate snapshot was determined for each industry of focus by identifying the proportion of people employed in the top 10 Out-of-County commuter occupations compared to the total individuals employed within that industry.

<sup>61</sup> A focus on occupation-level data may neglect commuters with similar job skills in a different industry who, otherwise, would be just as likely to take a similar job closer to home.

<sup>62</sup> The averages are calculated on a four-quarter bases.

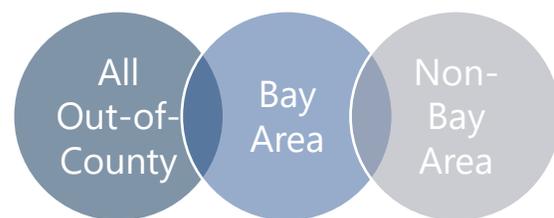
<sup>63</sup>  $[(\text{Current Employment} + \text{Growth Employment}) / \text{Current Employment}] ^ {1/\# \text{ of years}} - 1$ .

Industry assessment key findings include:

- Health Care and Social Assistance is anticipated to have the greatest job demand compared to any other industry by 2025.
- The Health Care and Social Assistance industry is expected to add 3,635 more jobs in Stanislaus County over the next five years, demonstrating potential to hire commuters to work locally.
- Future economic integration from the Bay Area may account for some expansion of newer industries, such as Professional, Scientific, and Technical Services, in Stanislaus County.
- 85% of commuters can be hired by key Stanislaus County industries to work locally.
- Representing over 5,000 new jobs over the next five years, promising industries for investment include Health Care and Social Assistance; Construction; Logistics/Warehousing; Educational Services; and Professional, Scientific, and Technical Services.

## What are the **industries of focus** for this assessment?

The industries selected for assessment cumulatively represent the Top 10 industries combined across all Out-of-County, Bay Area, and Non-Bay Area commuters [minus the Unspecified Industry category]. The resulting list of industries that were examined for potential investment include:



1. Health Care and Social Assistance
2. Construction
3. Manufacturing
4. Public Administration
5. Educational Services
6. Logistics/ Warehousing
7. Professional, Scientific, and Technical Services
8. Retail Trade
9. Accommodation and Food Services
10. Finance and Insurance
11. Utilities
12. Management of Companies and Enterprises

For the complete matrix demonstrating how industry categories ranked by commuter population, see Appendix K.

## Finding 19. Health Care and Social Assistance is anticipated to have the greatest job demand compared to any other industry by 2025.

Job demand is the total change in employment that takes into account employment growth, exits, and transfers. Job demand reflects an industry's need for more or less workers during the time period examined. A low or negative job demand can indicate an industry in crisis, either due to economic contraction or a lack of eligible skilled workers to replace those exiting the industry.

It is anticipated that in five years, Health Care and Social Assistance will have the demand for 21,079 jobs. Retail Trade and Accommodation and Food Services both projected to have a similar demand of about 15,000 jobs each. Industries such as Management of Companies and Enterprises and Utilities are projected to have the least amount of job demand compared to other industries [748 and 633 jobs, respectively].

**Table 19. Employment and job growth by industry**

Industry	Exits	Transfers	Employment Growth	Total Job Demand
Health Care and Social Assistance	8,578	8,867	3,635	21,079
Retail Trade	7,038	8,893	-219	15,713
Accommodation and Food Services	6,398	8,058	946	15,403
Manufacturing	4,173	7,146	-115	11,204
Educational Services	4,574	4,936	201	9,711
Construction	2,202	3,939	609	6,750
Transportation and Warehousing	2,343	3,171	419	5,933
Professional, Scientific, and Technical Services	1,056	1,787	262	3,106
Public Administration	1,048	1,426	84	2,558
Finance and Insurance	596	978	61	1,636
Management of Companies and Enterprises	262	447	38	748
Utilities	233	410	-10	633

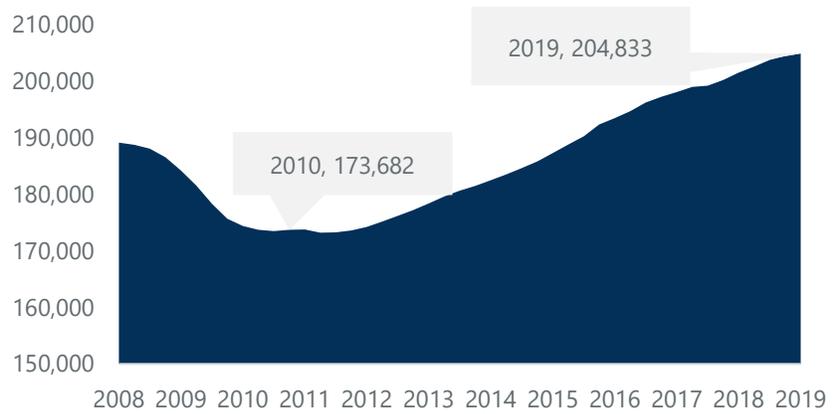
Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

**Finding 20. The Health Care and Social Assistance industry is expected to add 3,635 more jobs in Stanislaus County over the next five years, demonstrating potential to hire commuters to work locally.**

Between 2010 and 2019, Stanislaus County added 31,151 jobs [see Figure 22]. Thirteen different industries contributed to this economic expansion. The five industries that contributed the most to this expansion included Health Care and Social Assistance [11, 739 jobs added], Accommodation and Food Services [3,833 jobs added], Construction [3,338 jobs added], Logistics/Warehousing [3,335 jobs added], and Retail Trade [3,190 jobs added].

Of the 12 industries assessed for potential investment, nine industries demonstrated expansion over the past 10 years. However, Public Administration, Management of Companies and Enterprises, and Finance and Insurance saw job decreases during the same 10-year time period [a reduction of 282, 388, and 393 jobs respectively by industry]. Figure 23 below provides a complete listing of industries ranked by their past 10-years of employment change.

**Figure 22. Employment growth in Stanislaus County, by year**



Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

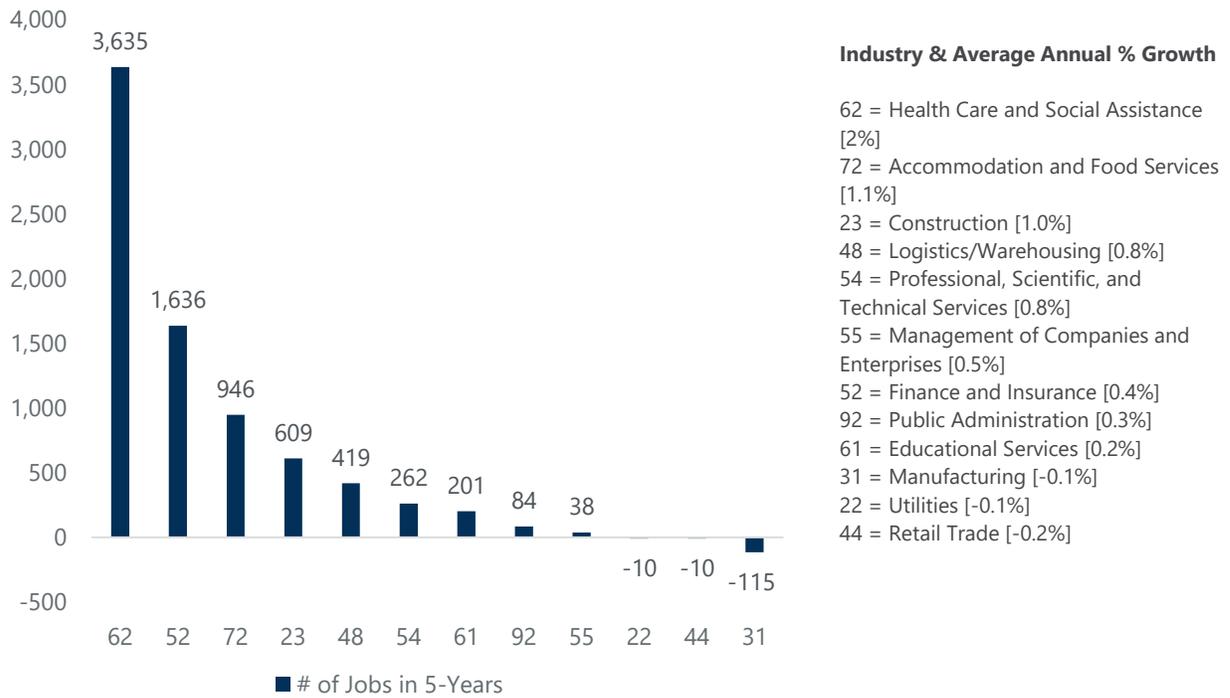
**Figure 23. 10-year change in employment [number of jobs], by industry**



Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

In addition to historical growth, assessing industries by forecasted growth supports decision makers to make investments that maximize potential economic expansion. The Healthcare and Social Assistance industry is expected to expand at an annual average rate of 2% over the next five years, adding 3,635 jobs in Stanislaus County. Overall, nine out of the 12 industries assessed demonstrated positive annual average growth rates. The three industries that will potentially contract over the next five years include Utilities [-10 jobs], Manufacturing [-115 jobs], and Retail Trade [-219 jobs]. See Figure 24 for a complete overview of forecasted employment by industry.

**Figure 24. Forecasted 5-year employment growth [number of new jobs], by industry**



Source: Chmura Economics & Analytics, JobsEQ Industry Snapshot [as of 2019 Q3]

**Finding 21. Future economic integration from the Bay Area may account for some expansion of newer industries, such as Professional, Scientific, and Technical Services, in Stanislaus County.**

Economic integration provides examples of the expansion of prime Bay Area industries toward surrounding counties. For instance, the biotechnology and biomedical industries were formed in the Bay Area in the 1970s via the higher education institutions but began expanding beyond those boundaries toward Sacramento. The University of California, Davis [in Yolo County] began its own agricultural-biotech program and is now an international leader in that aspect of biotech. Major biotech firms such as Genentech are located in Vacaville, in Yolo County, and along the Highway 80 corridor. Similarly, in the 1980s, major Silicon Valley firms opened branch plants for manufacturing and back-office work in the suburbs around Sacramento. While these firms also expanded in other locations around world, the choice of the Central Valley was based on the close proximity to the headquarter firm as well as access to a lower cost business climate.<sup>64</sup>

*“Another piece is housing costs in the area. For example, a line staff is thinking of moving to work in our Sacramento office due to housing costs in the Bay Area. It is also helpful to the company to locate in a place with low leasing cost and office space. The drawback is the skillset and talent pool, particularly on the technology side.*

– Employer interview



<sup>64</sup> SPUR report:

[https://www.spur.org/sites/default/files/publications\\_pdfs/SPUR The Northern California Megaregion.pdf](https://www.spur.org/sites/default/files/publications_pdfs/SPUR%20The%20Northern%20California%20Megaregion.pdf)

## Commuter Transferable Skills Analysis

### **Finding 22. 85% of commuters can be hired by key Stanislaus County industries to work locally.**

Transferable skills are the portable qualities of workers that can be taken from one job to another, such as communication skills, teamwork, and leadership ability, among others. These are also skills associated with workers' occupations regardless of the industry sectors within which they are employed. The goal of assessing workers' transferable skills is to identify if the commuter population possess skills [vis-à-vis occupations] that are in demand by the industries of focus for this assessment.

The top 10 occupation categories were identified for each commuter population's destination – All Out-of-County, Bay Area, and Non-Bay Area. Each commuter population had the same nine occupation categories in common, plus one that was unique to each group. Thus, 12 occupation categories were used in this analysis altogether. Please refer to Appendix for the complete list of occupations that were selected with occupation category rankings by commuter destination.

The second step in the transferable skills analysis was to understand the proportion of jobs commuters would qualify for [or can be transferred to] among the industries of focus for the assessment. Total employment for each industry of focus was calculated followed by the total number of employees within the 13 commuter occupation categories. The transferable skills rate was calculated as the proportion of employees in the 13 commuter occupation categories of the total employees working in the industry for the time period assessed.

Overall, all industry sectors of focus for the assessment had a high transferable skills rate with the commuter population. Eight of the 12 industry sectors had a transferable skill rate at or above 90%. Accommodation and Food Service had the lowest rate [56%] of transferable skills, followed by Health Care and Social Assistance [61%] and Public Administration [80%]. See

Table 20 for the complete list of industries and transferable skill rates. In total, 85% of the commuter population can be hired to work locally in the industries assessed for potential investment.



**Table 20. Proportion of commuter population transferable skills to industries of focus**

Industry	# of Employees from Top Commuter Occupations	Total Employees	% Transferable Skills
Utilities	1,210	1,345	90%
Construction	12,062	12,174	99%
Manufacturing	42,468	44,154	96%
Retail Trade	46,671	48,156	97%
Transportation and Warehousing	19,353	19,551	99%
Professional, Scientific, and Technical Services	11,682	13,012	90%
Management of Companies and Enterprises	2,957	3,037	97%
Educational Services	38,219	40,887	93%
Health Care and Social Assistance	21,221	35,044	61%
Accommodation and Food Services	19,398	34,489	56%
Public Administration	8,575	10,666	80%
Finance and Insurance	5,259	6,792	77%
<b>Grand Total</b>	<b>229,074</b>	<b>269,308</b>	<b>85%</b>

Source: Chmura Economics & Analytics, JobsEQ Occupation Snapshot [as of 2019 Q2]

## Industry Assessment Results

**Finding 23. Representing over 5,000 new jobs over the next five years, promising industries for investment include Health Care and Social Assistance; Construction; Logistics/Warehousing; Educational Services; and Professional, Scientific, and Technical Services.**

Recommended industries for potential growth and development include Health Care and Social Assistance; Construction; Logistics/Warehousing; Educational Services; and Professional, Scientific, and Technical Services. The recommended industries demonstrate positive performance for historic and forecasted employment growth, forecasted job demand, and a high rate [greater than 50%] of commuter transferable skills. The recommended industries also employ greater than 5% of the commuter population surveyed. For the complete results of the industry assessment, see Table 21. The listing of industries that met and did not meet recommendation criteria according to the assessment is provided below in Figure 25.

**Figure 25. Industries assessed for alignment for development criteria**

Industries that <b>meet the criteria</b>	Industries that <b>do not meet the criteria</b>
<ul style="list-style-type: none"> <li>• Health Care and Social Assistance</li> <li>• Construction</li> <li>• Logistics/Warehousing</li> <li>• Educational Services</li> <li>• Professional, Scientific, and Technical Services</li> </ul>	<ul style="list-style-type: none"> <li>• Accommodation and Food Service</li> <li>• Manufacturing</li> <li>• Retail Trade</li> <li>• Public Administration</li> <li>• Retail Trade</li> <li>• Utilities</li> <li>• Finance and Insurance</li> </ul>

As is expected, the Health Care and Social Assistance industry currently is and will likely be the best industry for development. Health Care and Social Assistance is also more insulated from recessions compared to other industries dependent on economic activity in other sectors [e.g., construction is dependent on healthy housing market for growth]. The diversity of funding sources, including fees for services as well as public and private investments, for Health Care and Social Assistance is also a key strength as it adds sustainability to the sector. In terms of job generation, Health Care and Social Assistance also supports upward mobility of workers, as most occupations within healthcare offer a wage at or above a living wage standard, and opportunities for career advancement.



Education Services also meets the criteria for development and is expected to continue to grow over the next five years. Like Health Care and Social Assistance, Education Services is dependent on revenue from both private and public sector funding. These factors make it somewhat insulated from economic instability, but this likely varies across educational settings and institutions. That said, the demand for teachers, instructors, and paraprofessionals will likely continue to grow and generate jobs in Stanislaus County.

Construction and Logistics/Warehousing also meet the criteria for development, as they are expected to have steady growth over the next five years and continue to generate jobs in Stanislaus County. However, these industries are both reliant on a strong overall economy and, as such, are at a greater risk for substantial contraction in the case of a recession. These industries may also see a workforce change due to shifting technologies and automation. The Logistics/Warehousing industry in particular is at high risk of seeing changes to its workforce due to increased efficiency from technological advancement and the automation of jobs.<sup>65</sup> One recommendation to minimize the risk of job loss is to invest in education and training programs that will increase skills needed to support technological advances in specific industries.

Professional, Scientific, and Technical Services also meets the criteria for development. While this industry is currently much smaller than the other four, the growth in this industry is likely to increase over the next five years as the technology and science centers within the Bay Area continue to expand and integrate into the Central Valley. It is not surprising that this industry has a smaller footprint in the County, as companies in this industry tend to locate in proximity to skill clusters [e.g., universities, technology centers, areas with high concentrations of startups and capital]. However, as the Bay Area continues to grow in this area, and the cost of doing business there continues to increase, more companies will likely continue to seek out locations in adjacent counties within the Central Valley, as has happened in the past with the Bio-Technology field.

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<sup>65</sup> Brookings Institute. 2019. "Automation and Artificial Intelligence: How machines are affecting people and places." <https://www.brookings.edu/research/automation-and-artificial-intelligence-how-machines-affect-people-and-places/>

Table 21. Assessment of opportunities for top industries in Stanislaus County

Top Industries in Stanislaus County	Job Growth [10-year history]	Job Growth [5-year forecast]	Job Demand [5-year forecast]	Commutes Out-of-County	Commuter Transferable Skills
<b>Industries that <i>meet the criteria</i> for potential investment:</b>					
Health Care and Social Assistance	11,739	3,635	21,079	14%	61%
Construction	3,338	609	6,750	14%	99%
Logistics/Warehousing	3,335	419	5,933	10%	99%
Educational Services	2,400	201	9,711	11%	93%
Professional, Scientific, and Technical Services	750	262	3,106	5%	90%
<b>Industries that <i>do not meet the criteria</i> for potential investment:</b>					
Accommodation and Food Service	3,833	946	15,403	4%	56%
Retail Trade	3,190	-219	15,713	4%	97%
Manufacturing	297	-115	11,204	12%	96%
Utilities	129	-10	633	2%	90%
Public Administration	-282	84	2,558	11%	80%
Management of Companies and Enterprises	-388	38	748	2%	96%
Finance and Insurance	-393	61	1,636	2%	77%



# Workforce and Economic Opportunities

## KEY FINDINGS REVIEW

- The City of Modesto is home to the second greatest share of super-commuters in the U.S., driven by differences in wages and cost of living between the Bay Area and Stanislaus County.
- Workforce trends demonstrate increasing concentration of employment within fewer industries, based on population aging and challenges to increasing education attainment.
- Health Care and Social Assistance is anticipated to have the greatest job demand compared to any other industry and add 3,635 new jobs in Stanislaus County by 2025.
- 85% of commuters can be hired to work for the following industries with the strongest outlook: Health Care and Social Assistance; Construction; Logistics/Warehousing; Educational Services; and Professional, Scientific, and Technical Services.

# Recommendations for Next Steps

In addition to identifying industries that intersect criteria for development, RDA further recommends the following strategies to spur local workforce and economic growth. These strategies are based on a combination of industry research and input from employers interviewed as part of this study.

## Public Policy and Communication Strategies

- 1. Promote the County's strategic geographic positioning as a gateway and hub to many West Coast population centers.**

Stanislaus County is geographically positioned at the intersection of major transportation corridors, metropolitan regions, and agricultural zones integral to the economy of California and the nation. Stanislaus County's proximity to Highway 5 [and Highway 99 to an extent], a major route connecting the entire length of the western United States, serves as a hub for industries that rely on shipping, transportation, and warehousing. The I-580 corridor connects the region to the San Francisco Bay Area and acts as a conduit for commuters and goods passing to and from the Port of Oakland. Stanislaus County is also within a five-hour drive from multiple international airports and contains several local and national railways.

- 2. Promote and support enrollment in CalSavers for private sector employers as a strategy to attract local workers.**

Beginning in July 2019, private sector employers may elect to register for the California Employment Development Department's CalSavers retirement savings program. CalSavers is a State of California-administered retirement program that offers a Roth Individual Retirement Account (IRA) to workers whose employers do not offer a retirement plan. This program will help reduce the gap of individuals without any retirement savings, particularly for employees in service sector and low wage occupations. CalSavers is an attractive option for small businesses without a retirement plan that are looking to attract talent. Employers that do not have a retirement plan and have more than five employees are encouraged to register to allow their employees to access this program. There are no fees, contributions, or fiduciary responsibilities required on the part of the employer. SCWD can leverage this opportunity to provide local businesses with technical assistance on compliance with the new state laws associated with CalSavers implementation, and technical assistance for how to enroll.<sup>66</sup>

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<sup>66</sup> <https://www.edd.ca.gov/employers/calsavers.htm>

## Workforce Development Strategies

### 1. Continue to develop and assess the effectiveness of Opportunity Zones.

Opportunity Zones (OZ) were established by The Tax Cuts and Jobs Act of 2017 to encourage investment in economically-distressed communities. OZ are low income census tracts selected by states and approved by the Internal Revenue Service [IRS]. For a census tract to qualify as an OZ, it must meet the standards of a “low-income community” defined by the IRS by either having a poverty rate of 20% or a median family income that does not exceed 80% of the statewide median family income.<sup>67</sup> In Stanislaus County, there are currently 17 census tracts that are qualified opportunity zones.<sup>68</sup>

The purpose of this program is to increase the investment of resources by offsetting the amount of taxes companies and individuals pay on capital gains. Potential investors create opportunity funds for a specific zone that can be used to attract new businesses to establish operations in the area, which creates jobs to support the local economy and workforce.<sup>69</sup> The use of job creation tax credits can continue to incentivize employers that establish operations in the region, but SCWD should monitor closely the impacts of those tax credits. Job creation tax credits are most effectively used to expand net employment and payroll, rather than just on the amount of hiring that is taking place.<sup>70</sup>

### 2. Continue to create entrepreneurship development or incubator programs that support small business growth and monitor their effectiveness.

Business incubation is a prevalent business support model that has grown in popularity since the 1980s. Although the business incubation model was primarily developed for use in the private sector, increasing attention has been paid to understanding its effectiveness for use in public-private partnerships.<sup>71</sup> Stanislaus County is already leveraging Opportunity Zones to support leadership development for small business owners. SCWD should continue to foster the development of small business owners and entrepreneurs by focusing on small business job creation, skills needed to recruit and retain talent, and professional mentorship to guide new owners in the creation of intellectual property.<sup>72</sup>

### 3. Create opportunities for subsidized on-the-job learning and training in target industries by leveraging community college capacity to create tailored career pathway programs.

Career technical education [CTE] is the most well documented type of learn-and-earn model. CTE programs encompass a variety of educational levels from certificates to two- and four-year degrees that focus on linking a career-oriented curriculum from secondary through post-secondary education. CTE has been shown to improve students’ career-specific knowledge and skills, ability

<sup>67</sup> <https://www.irs.gov/credits-deductions/opportunity-zones-frequently-asked-questions>

<sup>68</sup> For a list of Qualified Opportunity Zones in Stanislaus County see: <https://www.cdfifund.gov/Pages/Opportunity-Zones.aspx>

<sup>69</sup> <https://www.taxpolicycenter.org/briefing-book/what-are-opportunity-zones-and-how-do-they-work>

<sup>70</sup> [https://www.epi.org/publication/not\\_all\\_job\\_creation\\_tax\\_credits\\_are\\_created\\_equal/](https://www.epi.org/publication/not_all_job_creation_tax_credits_are_created_equal/)

<sup>71</sup> [https://www.researchgate.net/publication/227652804\\_MEASURING\\_THE\\_EFFECTIVENESS\\_OF\\_BUSINESS\\_INCUBATORS\\_A\\_FOUR\\_DIMENSIONS\\_APPROACH\\_FROM\\_A\\_GULF\\_COOPERATION\\_COUNCIL\\_PERSPECTIVE](https://www.researchgate.net/publication/227652804_MEASURING_THE_EFFECTIVENESS_OF_BUSINESS_INCUBATORS_A_FOUR_DIMENSIONS_APPROACH_FROM_A_GULF_COOPERATION_COUNCIL_PERSPECTIVE)

<sup>72</sup> Ibid.

to advance in their careers, overall employability, and potential earnings. Models that focus on Science, Technology, Engineering, and Math [STEM] fields have produced the strongest evidence that students learn the skills needed to perform their jobs successfully upon completion.<sup>73</sup> SCWD can leverage existing relationships with local colleges and community colleges to develop tailored pathway programs that target the industries identified for potential investment [e.g., Health Care and Social Assistance, Logistics/Warehousing].

**4. Leverage workforce training and assisted employment programs to provide workers with transferable skills and gain opportunities in strategic occupations and industries.**

Existing workforce training and assisted employment programs can provide job seekers with opportunities to learn high-demand skills and gain employment in strategic industries. These programs include: On-the-job training, work experience, customize training programs, incumbent worker training, pre-apprenticeships programs, sector strategies partnerships, and individual training programs. These programs are already utilized by workforce development programs to provide job seekers, especially those who face employment barriers, with career pipelines to high-demand occupations and industries.

## Employer Strategies

**1. Promote the County's lower cost of living and access to nearby amenities when marketing job opportunities.**

Employers who participated in this study emphasized the competitive advantage Stanislaus County has over other regions as far as cost of living and access to nearby amenities, such as Yosemite National Park and Lake Tahoe. With the cost of living continuing to increase, employers can use strategic messaging to market a better quality of life for those living and working in the region.

**2. Consider incentives such as relocation assistance for workers willing to move to Stanislaus County.**

Additionally, to overcome resistance to relocating to Stanislaus County for work, employers can offer relocation assistance that will help workers and their families establish themselves in the community. Employers who participated in this study mentioned relocation assistance as a successful strategy, especially for younger families with children and for older working adults seeking to position themselves in a place that is more affordable to live that can carry them over into retirement.

**3. Establish smaller satellite offices in skill cluster areas [e.g., nearby universities, Silicon Valley] to expand to reach new talent.**

Tech-oriented employers identified the benefits of establishing smaller satellite offices near skill or talent clusters in Silicon Valley or the San Francisco Bay Area, while maintaining their central headquarters in the Central Valley. Both businesses and employees benefit from this strategy. Employees maintain access to the knowledge and skill centers where they learn new and emerging skills to stay competitive in their line of work. Employers also benefit from the more direct

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<sup>73</sup> <http://www.ceri.msu.edu/wp-content/uploads/2010/01/Analysis-of-Learn-and-Earn1.pdf>

connection to top talent, while saving resources by keeping headquarters in an area with lower operating and capital costs [e.g., land, rent, taxes, utilities].

**4. Identify businesses that have large numbers of commuting employees and encourage these businesses to relocate part or all of their business.**

The Stanislaus County Workforce Development Board and County Executive Office should develop a strategy to identify and engage with Out-of-County businesses with large numbers of employees from Stanislaus County. The goals of this strategy should be to better inform businesses on the labor force in Stanislaus and provide a business case for relocating all or parts of their business to Stanislaus County. The Workforce Development Board and County Executive Office should review available data including data from the 2020 Stanislaus County Commuter Survey to identify industries, occupations, and employers of Out-of-County commuters that may be likely to consider relocation to Stanislaus County and develop an outreach and marketing plan to engage business owners and present the business case for relocating. This plan should aim to both inform the employers of: 1) the local workforce in Stanislaus County; 2) the value and sustainability of having a local workforce vs. a workforce that commutes long distances; and 3) the fiscal, geographic, and community-based benefits of relocating all or parts of their business to Stanislaus County.

**5. Educate local employers of the number of identified commuters and skills that are leaving the community on a regular basis.**

Paired with the previous strategy, the Workforce Development Board and County Executive Office should also use the Commuter Study to bolster local businesses. Providing local businesses with information on the workforce characteristics of the Out-of-County commuters can help them better compete with Out-of-County business, retain talent, and hire for hard-to-fill positions. For example, most commuters said they would take a local job for the same pay or slightly less. This is a valuable piece of information that can help local employers better compete with Out-of-County employers that offer higher compensation. The Workforce Board should develop a plan to present information on commuters, including wages, commute times, and preference to work from home, to business owners and employers at existing venues such as Chamber of Commerce, professional groups, and business-focused civic organizations like the Rotary Club.



## **RECOMMENDATIONS FOR NEXT STEPS**

### KEY FINDINGS REVIEW

- Promote both the strategic geographic positioning of the County and opportunity to leverage CalSavers retirement program to potential employees.
- Partner with local community colleges to develop earn-and-learn pathways tailored to identified industries.
- Support potential employers to develop strategies that attract more local talent.

# Appendices



# Appendix A. 2020 Stanislaus County Commuter Survey (English & Spanish)



<Addressee>  
 <Address Line 1>  
 <Address Line 2>  
 <City>, CA <postcode>

For a Spanish version, see Page 5.  
 Para la versión en español, vea la página 5.

Dear <Addressee>:

September 10, 2019

**We need your help.** As part of our efforts to help make your community a better place to live and work, Stanislaus County Workforce Development has contracted Resource Development Associates (RDA) to survey Stanislaus County residents who travel outside the County for work to better understand your commute experience, job skills and employment needs. Stanislaus County Workforce Development will use your responses to inform its ongoing outreach efforts to attract businesses that support and grow the local workforce.

**These efforts may ultimately lead to job opportunities closer to home for you and your family, shorter commute times, less traffic congestion, and better air quality from reduced traffic!**

This quick 10-15 minute survey is completely confidential. Please have one employed person in your household complete this survey, preferably one who commutes across Interstate-580 (I-580) Altamont Pass. Please read the questions carefully, print your answers clearly, and **mail back the completed survey in the enclosed pre-paid envelope within one week.** Up to 100 people who complete the survey will win a \$100 gift card. Individuals who want to tell us even more about their commute can go to [www.stancocommute.com](http://www.stancocommute.com) to sign up for focus groups or phone calls. Eligible participants will receive a \$50 gift card.

Thank you for taking the time to help Stanislaus County Workforce Development support the community through healthy business growth and a strong workforce. Questions? Please contact the RDA Research Team at [stancocommute@resourcedevelopment.net](mailto:stancocommute@resourcedevelopment.net)

Sincerely,

William O'Brien  
 Chair, Stanislaus County Workforce Development Board

<b>MAIL IT</b> Complete this survey and mail it back in the pre-paid envelope	<b>TAKE IT ONLINE</b> Go to <a href="http://www.stancocommute.com">www.stancocommute.com</a> and complete the survey online	<b>SCAN IT</b> Scan the QR code to take online survey		<b>EARN \$50</b> Share your opinion by phone or join a focus group and earn \$50!
<b>ENTER TO WIN \$100 GIFT CARD!</b> Drawing for winner on 10/14/19 <input type="checkbox"/> Please enter my name in the drawing. My contact info is listed below.				
<b>EARN \$50 by sharing your opinion by phone or in a focus group!</b> <input type="checkbox"/> I'm interested please contact me! <input type="checkbox"/> I am not interested				
We will be conducting phone interviews with eligible residents to gather more in-depth perspectives about residents' experiences commuting to work. We will be offering \$50 gift card as compensation. Please indicate your interest, write in your contact information, and we will follow up with you to provide further details.				
<b>CONTACT INFO</b> Email: _____ Phone # (    ) _____ - _____				

SURVEY RAFFLE PRIZE: We will only use this information to contact you if you win the raffle. Anyone is eligible for winning the raffle, even if you do not complete the survey. Winners will be posted on the SCWD website by October 14, 2019 and winners will be notified by phone. A total of 100 gift cards will be awarded. The raffle and this survey are not affiliated with or endorsed by any of the companies that manufacture the prizes.



1) Do you currently meet all of the following criteria?  
 Resident of Stanislaus County  
 Employed (Full-time, part-time, or contract basis)  
 Between 18-64 years old  
 YES → PROCEED to Question 2  
 NO → STOP and mail back incomplete survey

2) In a typical work week, how many days a week do you work from home? (select one)  
 None  
 1 day  
 2 days     4 days  
 3 days     5 or more days

3) In a typical work week, how many days a week do you commute from home to work? (select one)  
 None → SKIP to Question 13  
 1 day  
 2 days     4 days  
 3 days     5 or more days

4) In a typical week, which modes of travel do you use to commute to work? (select all that apply)  
 Driving alone (i.e., car, van, motorcycle, truck)  
 Carpooling or vanpooling  
 Company shuttle or bus  
 Train or public bus  
 Other, please specify:

5) What time do you typically begin your commute to work?  
 :  am / pm (circle one)

6) Where do you start your trip?  
 city name  
 zip code

7) Where do end your trip?  
 city name  
 zip code

8) How many miles is your one-way trip to work?  
 miles

9) On average, how long does it take for you to reach your destination (one-way)?  
 hour(s)  minute(s)

10) How much do you spend on a typical week for each of the following work-related transportation expenses?  
 Fuel/Gas: \$        
 Parking: \$        
 Tolls/Express Lane: \$        
 Bus/BART/Train: \$        
 Other: \$

11) If you commute out of county for work, which major freeway(s) do you take to work? (select all that apply)  
 I do not commute out of county for work.  
 I-680     I-580     SR-152     I-880  
 Other, please specify:

12) In a typical work week, how many days a week do you travel over the Altamont Pass for work? (select one)  
 I do not travel over Altamont Pass for work  
 1 day  
 2 days     4 days  
 3 days     5 or more days

13) Not including yourself, how many people in your household commute across the I-580 Altamont Pass for work?  
 household members

14) Does your work commute negatively affect your personal or family life? (select one)  
 Not at all → SKIP to Question 16  
 A little bit     Somewhat     A lot

15) What aspects of your personal or family life are negatively impacted by your commute? (select all that apply)  
 Physical Health     Mental health  
 Time to pursue my own interests     Finances  
 Time to spend with family     Sleep  
 Other, please specify:



16) What factors affect your commuting decisions? *(select all that apply)*

Physical Health                       Mental Health  
 Employer benefits                       Financial Cost  
 Government sponsored commute program  
 Other, please specify:

17) What is your employment status? *(select one)*

Full-Time Employment  
 Part-Time Employment  
 Contract-Based Employment  
 Other, please specify:

18) Please write in your job title:

Title:

19) Please select the statement that applies best to your current position in your company: *(select one)*

I do not supervise other employees.  
 I am not a supervisor but provide guidance and leadership on work projects.  
 I supervise other employees.  
 I am a manager and supervise supervisors.  
 I am a head of a department or agency.

20) What is the name of the company or organization that you work for?

21) Which of the following occupation categories does your job align with? *(select the one that best applies)*

Architecture and Engineering  
 Arts, Design, Entertainment, Sports, and Media  
 Business and Financial Operations  
 Building and Grounds Cleaning and Maintenance  
 Community and Social Service  
 Computer and Mathematical  
 Construction and Extraction  
 Educational Instruction and Library  
 Farming, Fishing, and Forestry  
 Food Preparation and Serving Related  
 Healthcare Practitioners and Technical  
 Healthcare Support  
 Installation, Maintenance, and Repair

*(Question 21 continued)*

Legal  
 Life, Physical, and Social Science  
 Management  
 Military Specific  
 Office and Administrative Support  
 Personal Care and Service  
 Production  
 Protective Service  
 Sales and Related  
 Transportation and Material Moving  
 Other, please specify:

22) Which of the following industry categories does your company align with? *(select the one that best applies)*

Accommodation & Food Services  
 Administrative & Support & Waste Management & Remediation Services  
 Agriculture, Forestry, Fishing & Hunting  
 Arts, Entertainment, & Recreation  
 Construction  
 Educational Services  
 Finance and Insurance  
 Health Care & Social Assistance  
 Information  
 Mining, Quarrying, and Oil and Gas Extraction  
 Management of Companies & Enterprises  
 Manufacturing  
 Other Services (except Public Administration)  
 Public Administration / Government  
 Professional, Scientific, & Technical Services (Tech)  
 Real Estate & Rental & Leasing  
 Retail Trade  
 Transportation & Warehousing  
 Wholesale Trade  
 Utilities  
 Other, please specify:

23) Is this company/organization in the tech industry (e.g., electronics, communications)?

NO                       YES

24) How long have you worked for your current employer?

less than 1 year                       6-10 years  
 1-3 years                       more than 10 years  
 4-5 years

25) What is your current annual salary (before taxes)?

\$           per year



26) What benefits does your employer offer? *(select all that apply)*

None

Insurance and medical benefits

Transportation benefits

Employer 401k contributions

Tips or commissions

Stocks or bonuses

Flexible working hours

Paid leave or time-off benefits

Other, please specify:  
\_\_\_\_\_

27) Would you take a same or similar job if it were available closer to home?

No → Go to Question 29

Yes

28) What change in salary would you require to take a same or similar job closer to home? *(select one)*

The same salary I now make → SKIP to Question 30

A little less than what I make now

A little more than what I make now

29) How much more or less annual salary would you require to consider taking a job closer to home?

\$ \_\_\_\_\_ , \_\_\_\_\_ per year

30) Including yourself, how many people permanently reside in your household?

\_\_\_\_\_

31) What is your household income (i.e., combined income of household adults before taxes)?

\$ \_\_\_\_\_ , \_\_\_\_\_ per year

32) How long have you been living at your current residence?

less than 1 year     1-3 years     3-5 years

5-10 years     10 or more years

33) Do you own your home?     NO     YES

34) What is your highest education level attained?

Less than a high school graduate

High School Graduate

Some college or associate's degree

Bachelor's degree

Graduate or professional degree

Other (e.g., training, certificate), please specify:  
\_\_\_\_\_

35) What is your marital status? *(select one)*

Married     Single     Divorced/Separated

Widowed     Domestic Partnership

36) Please check the box if you have children in the following age groups under your care? *(select all that apply)*

Under 6     ages 6-12     ages 13-17

I do not have children under my care

37) What is your gender? *(select one)*

Male     Female     A different gender

38) In what age category are you? *(select one)*

18-24     35-44     55-64

25-34     45-54     65 or older

39) What is your ethnicity? *(select one)*

Hispanic     Not Hispanic

40) What is your race? *(select all that apply)*

White     American Indian or Alaskan Native

Asian     African American

Other, please specify:  
\_\_\_\_\_

41) Are you a veteran of the U.S. Military?

NO     YES

42) What is your primary language? *(select one)*

English     Spanish

Other, please specify:  
\_\_\_\_\_

Please share any additional comments here:

\_\_\_\_\_



Estimado(a) Residente del Condado de Stanislaus:

10 de septiembre, 2019

**Necesitamos su ayuda.** Como parte de nuestros esfuerzos por hacer de su comunidad un mejor lugar para vivir y trabajar, Stanislaus County Workforce Development ha contratado a Resource Development Associates (RDA) para que realice una encuesta con los residentes del Condado de Stanislaus que viajan fuera del condado por trabajo, para entender mejor su experiencia de viaje, habilidades de trabajo y necesidades de empleo. Desarrollo de Fuerza Laboral del Condado de Stanislaus (Stanislaus County Workforce Development) usará sus respuestas para ayudar a dirigir sus continuos esfuerzos con la comunidad para atraer negocios que apoyen y desarrollen la fuerza laboral local.

**Estos esfuerzos pueden, en definitiva, llevar a oportunidades de empleo para usted y su familia más cerca del hogar, tiempos de viaje al trabajo más cortos, menos congestión de tráfico y, por consecuencia, ¡una mejor calidad de aire!**

Esta rápida encuesta de 10 a 15 minutos es absolutamente confidencial. Pídale por favor a una persona empleada de su hogar que complete esta encuesta, preferentemente alguien que viaje al trabajo por Altamont Pass en la autopista Interstate-580 (I-580). Lea las preguntas con atención, escriba sus respuestas en letra impresa con claridad y **envíe de vuelta la encuesta completa dentro de una semana en el sobre de franqueo pre pagado.** Hasta 100 personas que completen la encuesta ganarán una tarjeta de regalo de \$100. Las personas que deseen compartir aún más acerca de su viaje al trabajo pueden ir a [www.stancocommute.com](http://www.stancocommute.com) para inscribirse en grupos de temas enfocados o para llamadas telefónicas. Los participantes que califiquen recibirán una tarjeta de regalo de \$50.

Gracias por tomarse el tiempo de ayudar a Desarrollo de Fuerza Laboral del Condado de Stanislaus a apoyar a la comunidad a través del desarrollo saludable de negocios y de una fuerza laboral sólida. ¿Tiene preguntas? Sírvase comunicarse con el equipo de investigación de RDA en [stancocommute@resourcedevelopment.net](mailto:stancocommute@resourcedevelopment.net).

Sincerely,

William O'Brien

Presidente, Consejo de Desarrollo de Fuerza Laboral del Condado de Stanislaus

<b>POR CORREO</b> Complete esta encuesta y envíela de vuelta por correo en el sobre de envío pre pagado	<b>EN LÍNEA</b> Diríjase a <a href="http://www.stancocommute.com">www.stancocommute.com</a> y complete la encuesta en línea	<b>ESCANEAR</b> Escanee el código QR para completar la encuesta en línea		<b>GAÑE \$50</b> Comparta su opinión por teléfono o participe en un grupo de temas enfocados y gane \$50!
<b>¡PARTICIPE PARA GANAR UNA TARJETA DE \$100!</b>		<input type="checkbox"/> Quiero participar en el sorteo! Mi información de contacto está a continuación.		
<b>¡GAÑE \$50 al compartir su opinión por teléfono o en un grupo de conversación enfocada!</b>		<input type="checkbox"/> Estoy interesado, ¡contácteme! <input type="checkbox"/> No estoy interesado		
<b>INFORMACIÓN DE CONTACTO</b>		Email: _____ Tel # (    ) _____ - _____		

Vamos a realizar entrevistas telefónicas con los residentes que califiquen para reunir perspectivas con más profundidad acerca de las experiencias de los residentes cuando viajan al trabajo. Ofreceremos tarjetas de regalo de \$50 como compensación. Sírvase indicar su interés, escriba su información de contacto y nos comunicaremos con usted para darle más detalles. PREMIO DE SORTEO: Solo utilizaremos esta información para comunicarnos con usted si gana el sorteo. Todos califican para ganar el sorteo, incluso si no completa la encuesta. Los ganadores serán publicados en el sitio web de SCWD para el 14 de octubre, 2019 y serán notificados por teléfono. Un total de 100 tarjetas de regalo serán sorteadas. El sorteo y esta encuesta no están afiliados ni son respaldados por ninguna de las compañías fabricantes de los premios



1) ¿Cumple usted actualmente con todos los criterios a continuación?  
 Residente del condado de Stanislaus  
 Empleado (tiempo completo, medio tiempo o bajo contrato)  
 Entre 18 y 64 años de edad  
 Sí → SIGA a la pregunta 2  
 NO → DETÉNGASE y devuelva la encuesta incompleta por correo

2) En una semana de trabajo típica, ¿cuántos días a la semana trabaja desde la casa? (seleccione uno)  
 0 días       3 días  
 1 día       4 días  
 2 días       5 o más días

3) En una semana de trabajo típica, ¿cuántos días a la semana viaja desde su hogar al trabajo? (seleccione uno)  
 0 → SIGA a la pregunta 13  
 1 día       3 días  
 2 días       4 días       5 o más días

4) En una semana típica, ¿qué formas de traslado usa para viajar al trabajo? (seleccione todas las que correspondan)  
 Manejo solo (ej. auto, van, motocicleta, camión)  
 Viaje de auto o van compartido  
 Minibus o bus de la compañía  
 Tren o bus público  
 Otro, especifique por favor:

5) ¿A qué hora comienza su viaje normalmente?  
 :  am / pm (encierre una en un círculo)

6) ¿Dónde comienza su viaje?  
 nombre de la ciudad  
 código postal

7) ¿Dónde termina su viaje?  
 nombre de la ciudad  
 código postal

8) ¿De cuántas millas es su viaje de ida al trabajo?  
 millas

9) En promedio, ¿cuánto se demora en llegar a su destino (solo de ida)?  
 hora(s)       minuto(s)

10) ¿Cuánto gasta en una semana típica para cada uno de los siguientes gastos de transporte relacionados al trabajo?  
 Gasolina: \$        
 Estacionamiento: \$        
 Peaje/Express Lane \$        
 Bus/BART/Tren: \$        
 Otro: \$

11) Si viaja por trabajo afuera del condado, ¿cuáles autopistas usa para llegar al trabajo? (seleccione todas las que correspondan)  
 No viajo afuera del condado por trabajo.  
 I-680       I-580       SR-152       I-880  
 Otra, especifique por favor:

12) En una semana de trabajo típica, ¿cuántos días a la semana pasa por el Altamont Pass por trabajo?  
 No paso por el Altamont Pass por trabajo  
 1 día       4 días  
 2 días       5 o más días  
 3 días

13) Sin incluirse usted mismo, ¿cuántas personas en su hogar viajan por el Altamont Pass en la I-580 por trabajo?  miembros del hogar

14) ¿Piensa usted que su vida personal o familiar es afectada de manera negativa por su viaje al trabajo?  
 No en absoluto → SIGA a la pregunta 16  
 Un poco       Más o menos       Muchísimo

15) ¿Qué aspectos de su vida personal o familiar se ven afectados de manera negativa por su viaje al trabajo? (seleccione todas las que correspondan)  
 Salud física       Salud mental  
 Tiempo para dedicar a mis intereses       Finanzas  
 Tiempo para la familia       Sueño  
 Otro, especifique por favor:



16) ¿Qué factores afectan sus decisiones de viaje al trabajo? (seleccione todas las que correspondan)

- Salud física
- Beneficios de empleador
- Programa de traslado auspiciado por el gobierno
- Otro, especifique por favor:
- Salud mental
- Costo financiero

17) ¿Cuál es su estatus de empleo? (seleccione uno)

- Empleo de tiempo completo
- Empleo de medio tiempo
- Empleo por contrato
- Otro, especifique por favor:

18) Escriba el título de su trabajo:

Título:

19) Seleccione la afirmación que mejor corresponda a su posición actual en su compañía: (seleccione una)

- No superviso a otros empleados
- No soy supervisor pero lidero y dirijo proyectos de trabajo.
- Superviso a otros empleados.
- Soy gerente y superviso a otros supervisores.
- Soy director de un departamento o agencia.

20) ¿Cuál es el nombre de la compañía u organización para la que trabaja?

21) ¿Con cuál de las siguientes categorías de ocupaciones se alinea su trabajo? (Seleccione la que mejor corresponda)

- Arquitectura e ingeniería
- Artes, diseño, entretenimiento, deportes y media
- Negocios y operaciones financieras
- Limpieza y mantenimiento de edificios y sitios
- Servicio social y comunitario
- Computación y matemáticas
- Construcción y extracción
- Instrucción educativa y biblioteca
- Agricultura, pesca y silvicultura
- Relacionado a preparación y servicio de comida
- Practicantes y técnicos de atención médica
- Apoyo de cuidado médico
- Instalación, mantenimiento y reparación
- Legal

(Continuación de pregunta 21)

- Ciencias físicas, sociales y de la vida
- Gerencia
- Específico a fuerzas armadas
- Apoyo administrativo y de oficina
- Servicio y cuidado personal
- Producción
- Servicios de protección
- Ventas y sectores relacionados
- Transporte y traslado de materiales
- Otro, especifique por favor:

22) ¿Con cuál de las siguientes categorías de industria se alinea su compañía? (Seleccione la que mejor corresponda)

- Servicios de hospedaje y comida
- Servicios administrativos y de apoyo y de manejo de desechos y de remediación
- Agricultura, silvicultura, pesca y caza
- Artes, entretenimiento y recreación
- Construcción
- Servicios educativos
- Finanzas y seguros
- Cuidado médico y asistencia social
- Información
- Minería, canteras y extracción de petróleo y gas
- Gerencia de compañías y empresas
- Fabricación
- Otros servicios (excepto administración pública)
- Administración pública/gobierno
- Servicios profesionales, científicos y técnicos (Tech)
- Bienes raíces y rentas y leasing
- Comercio al por menor
- Transporte y bodegas
- Ventas al por mayor
- Servicios públicos
- Otro, especifique por favor:

23) Se encuentra esta compañía/organización en la industria tecnológica (como electrónicos, comunicaciones)?

- NO
- SÍ

24) ¿Cuánto tiempo ha trabajado para su empleador actual?

- menos de 1 año
- 1 a 3 años
- 4 a 5 años
- 6 a 10 años
- más de 10 años

25) ¿Cuál es su sueldo anual actual (antes de los impuestos)?

\$         al año





**26) ¿Qué beneficios ofrece su empleador?** *(seleccione todas las que correspondan)*

Ninguno

Seguro y beneficios médicos

Beneficios de transporte

Contribuciones de empleador a 401k

Propinas o comisiones

Acciones o bonos

Horas de trabajo flexibles

Permiso retribuido o prestaciones de permisos con goce de sueldo

Otro, especifique por favor: \_\_\_\_\_

**27) ¿Tomaría usted un trabajo igual o similar si estuviera disponible más cerca de su hogar?**

No → Siga a la pregunta 29

Sí

**28) ¿Qué cambio de sueldo pondría como requisito para tomar un trabajo igual o similar más cerca del hogar?** *(seleccione uno)*

El mismo sueldo que gano ahora → SIGA a la pregunta 30

Un poco menos de lo que gano ahora

Un poco más de lo que gano ahora

**29) ¿Cuánto sueldo anual más o cuánto sueldo menos pondría de requisito para considerar un trabajo más cerca del hogar?**

\$ \_\_\_\_\_, \_\_\_\_\_ al año

**30) Con usted incluido, ¿cuántas personas residen en su hogar de manera permanente?**

\_\_\_\_\_

**31) Cuál es el ingreso de su hogar (es decir, ingresos combinados de los adultos del hogar antes de los impuestos)?**

\$ \_\_\_\_\_, \_\_\_\_\_ al año

**32) ¿Cuánto tiempo ha vivido en su residencia actual?**

menos de 1 año     1 a 3 años     3 a 5 años

5 a 10 años     10 años o más

**33) ¿Es propietario de su hogar?**     NO     SÍ

**34) ¿Cuál es su nivel de educación más alto obtenido?**

No graduado de secundaria

Graduado de secundaria

Algo de college o un título de asociado

Título de bachiller

Título profesional o de graduado universitario

Otro (como entrenamiento, certificado), especifique por favor: \_\_\_\_\_

**35) ¿Cuál es su estado civil?** *(seleccione uno)*

Casado     Soltero     Divorciado/Separado

Viudo     Pareja doméstica

**36) Marque una casilla si tiene bajo su cuidado niños en los siguientes grupos de edad?** *(seleccione todas las que correspondan)*

bajo 6     edades 6 a 12     edades 13 a 17

No tengo niños bajo mi cuidado

**37) ¿Cuál es su género?** *(seleccione uno)*

Masculino     Femenino     Otro género

**38) ¿En qué categoría de edad se encuentra usted?**

18 a 24     35 a 44     55 a 64

25 a 34     45 a 54     65 o mayor

**39) ¿Cuál es su etnia?** *(seleccione uno)*

Hispánico     No hispánico

**40) ¿Cuál es su raza?** *(seleccione todas las que correspondan)*

Blanco     Nativo americano o de Alaska

Asiático     Afroamericano

Otro, especifique por favor: \_\_\_\_\_

**41) ¿Es usted veterano de las fuerzas armadas de Estados Unidos?**     NO     SÍ

**42) ¿Cuál es su idioma nativo?** *(seleccione uno)*

Inglés     Español

Otro, especifique por favor: \_\_\_\_\_

Comparta a continuación cualquier comentario adicional:

## Appendix B. Sample Size Calculations

### Sample Size Calculations

The following sample sizes were used to determine the ideal sample size needed to make inferences about the population and subpopulations [see Table 22].

**Table 22. Sample size calculations, Stanislaus County, CA<sup>74</sup>**

Target Population	Estimated Population	Ideal Sample Size <sup>75</sup>
Adults who are working	218,492 <sup>76</sup>	384 – 1,062
Adults who are working and commute for work	204,139 <sup>77</sup>	384 – 1,062
Adults who are working and commute out of Stanislaus County for work	51,924 <sup>78</sup>	382 – 1,046
Adults who are working and commute to Bay Area for work	43,924 <sup>79</sup>	381 – 1,042

### Representativeness

To ensure that the study sample population is representative of all residents across Stanislaus County, RDA employed post-stratification weighting based on zip code of residency. Thus, individuals residing in zip codes with a fewer number of survey respondents would still be adequately represented in the survey results. *Post-stratification weighting ensures that conclusions are not biased towards respondents living in more densely populated zip codes of Stanislaus County.*

<sup>74</sup> Sample sizes are based on statistically valid sampling sizes needed for populations of specific sizes and characteristics. RDA's sampling methods are derived from sample sizes and methodology provided in Salant and Dillman's book *How to Conduct Your Own Survey*, which has been cited in over 3,000 peer reviewed research papers for its methodological approach in similar studies to this project. For additional information of sampling sizes by population and confidence interval, please see the attached table.

<sup>75</sup> Dillman, D.A., and Salant, P. (1994). *How to Conduct Your Own Survey*. P 53 -75. New York. Wiley.

<sup>76</sup> Data Source: Census Bureau. American Community Survey. 2013-2017. Adults (16+ years old) who are residents of Stanislaus County and working; Includes Stanislaus residents employed outside of the County.

<sup>77</sup> Data Source: U.S. Census Bureau. American Community Survey. 2013-2017. Adults (16+ years old) who are residents of Stanislaus County, working, and reported commuting for work.

<sup>78</sup> Data Source: Census Bureau's American Community Survey, updated through 2013-2017. The questions pertain to a person's journey to work in the past week since they took the survey.

<sup>79</sup> Data Source: State of California Employment Development Department. 2015. *Stanislaus – County to County Commuting Estimates*. Accessed from <https://www.labormarketinfo.edd.ca.gov/file/commute-maps/stanislaus2010.pdf>.

## Comparison to Previous Commuter Studies

The 2020 Stanislaus County Commuter Study sample size exceeds the sample sizes of Stanislaus County residents used in the previous two commuter studies.

**Table 23. Sample size comparison to previous commuter studies**

Study Respondents	2000 Study	2006 Study	2019 Study
Stanislaus County Residents	997	463	3,061
Total Respondents <sup>80</sup>	4,577	1,995	

## Sample Size Determination

### Survey Sampling Methods from the Survey Methods Literature

The table below provides an array of sampling scenarios based on populations of different sizes, confidence intervals, and proportionality.<sup>81</sup> The sample sizes provide the thresholds required to achieve a 95% confidence level so that the sample reflects the true value of the larger population. These sample sizes are based on statistically valid sampling tables provided in Priscilla Salant and Don Dillman's book, *How to Conduct Your Own Survey*. This book is a highly referenced manual for conducting survey research and has been cited in over 3,500 peer reviewed research papers.<sup>82</sup>

**Table 24. Sample sizes for populations of various sizes and characteristics<sup>83</sup>**

Population Size	Confidence Interval: 3%		Confidence Interval: 5%		Confidence Interval: 10%	
	50/50 proportion	80/20 proportion	50/50 proportion	80/20 proportion	50/50 proportion	80/20 proportion
750	441	358	254	185	85	57
1,000	415	406	278	198	88	58
2,500	748	537	333	224	93	60
5,000	880	601	357	234	94	61
10,000	964	639	370	240	95	61
25,000	1,023	665	378	244	96	61
50,000	1,045	674	381	245	96	61
100,000	1,056	678	383	245	96	61
1,000,000	1,066	682	384	246	96	61

<sup>80</sup>Total respondents for both the 2000 and 2006 surveys included respondents from Alameda, Contra Costa, Merced, Sacramento, San Joaquin, and Stanislaus Counties.

<sup>81</sup> Dillman, D.A., and Salant, P. (1994). *How to Conduct Your Own Survey*. P 53 -75. New York. Wiley.

<sup>82</sup> This estimate is based on data provided by Google Scholar. Extracted December 5, 2019 from:

[https://scholar.google.com/scholar?oi=bibs&hl=en&cites=9364687985299580342&as\\_sdt=5](https://scholar.google.com/scholar?oi=bibs&hl=en&cites=9364687985299580342&as_sdt=5)

<sup>83</sup> *Ibid.*

**Proportionality** is used similarly to standard deviation to account for expected variation among survey respondents when determining ideal sample sizes. A 50/50 proportionality split is applied when the population being surveyed is expected to have high levels of variability whereas an 80/20 proportionality split is used to determine sample sizes of populations with less variation. Generally, researchers use 50/50 proportionality for surveying as this ensures that the calculated sample is large enough to accurately represent the overall population. Given the expected variability of commuter survey respondents in terms of industry, occupations, commuting patterns, and demographics, we have applied a 50/50 proportionality to our sampling approach.

## Applied Sample Methodology

To provide an exact estimation of the sample size needed to achieve a representative sample with a 95% confidence and low margin of error, RDA calculated the required number of respondents using the statistically valid formulas shown below. The outputs of both the sample size and confidence interval formulas are provided in Table 25.

To calculate the **representative sample sizes** for the number of eligible responses needed to have a representative sample, RDA applied the formula below using the total population, actual sample, z-score (confidence level), margin of error (3% and 5%), and population proportionality (0.5). We calculated sample size for both 3% and 5% margin of error (MOE) scenarios to show the range that the sample size should be at a minimum. The output of this formula is present in the table below as the ideal sample size with “3% MOE ” and “5% MOE .”

$$\text{Sample Size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

Where  $N$  = Population Size,  $e$  = Margin of error,  $z$  = z-score derived for 95% confidence level (1.96), and  $p$  = population proportionality (0.5)

The **confidence intervals** represent the margin of error that can be expected above and below the percent to which a sample reflects the general population. If the sample has a margin of error of 3% and a confidence level of 95%, a researcher can expect that the sample responses will reflect the responses of the larger population 95% of the time within a confidence interval of +/-3%. For sampling purposes, an acceptable margin of error in social sciences generally falls between 4% and 8%; while a margin of error below 4% is considered optimal, it is also not necessary for reliable conclusions from a sample.<sup>84</sup> To calculate the margin of error, RDA used the following formula using the sample size, population proportionality, and z-score of each sample. The output of this formula is presented in the table below under the actual sample size header as “MOE” and “Confidence Interval.”

$$z \times \frac{\sigma}{\sqrt{n}}$$

Where  $n$  = sample size,  $\sigma$  = standard deviation (population proportionality) (0.5), and  $z$  = z-score derived for 95% confidence level (1.96)

<sup>84</sup> DataStar. (2008). What Every Researcher Should Know About Statistical Significance. Extracted December 5, 2019 from <http://www.surveystar.com/startips/oct2008.pdf>

Using the above formulas, RDA calculated the statistically valid sample we would need to achieve a 95% confidence level within a 3-5% margin of error [MOE] as well as the margin of error achieved with our actual sample size.

**Table 25. Outputs of sample size and confidence interval formulas<sup>85</sup>**

Population	Population Size	Ideal Sample Size		Actual Sample Size (as of 12/6/2019)		
		3% MOE	5% MOE	Eligible Survey Respondents	MOE	Confidence Interval
<b>Adults who are working</b>	218,492 <sup>86</sup>	1,062	383	3,037	2%	+/-2%
<b>Adults who are working and commute for work</b>	204,139 <sup>87</sup>	1,062	384	2,822	2%	+/-2%
<b>Adults who are working and commute out of Stanislaus County for work</b>	51,924 <sup>88</sup>	1,046	381	1,796	2%	+/-2%
<b>Adult who are working and commute to the Bay Area for Work [Including San Joaquin County]</b>	43,924 <sup>89</sup>	1,046	382	1,275	3%	+/-3%
<b>Adults who are working and commute to Bay Area for work [excluding San Joaquin County]</b>	16,102 <sup>90</sup>	1,001	376	764	3.5%	+/-3.5%

## Final 2020 Stanislaus County Commuter Study Sample

The results of the 2020 Stanislaus County Commuter Study will be based on the following sample of 3,061 survey respondents. This study will also look at results from specific sub-populations. The table below provides the actual population sizes and for each sub-groups and the ideal and final sample sizes, margin of error (MOE), and confidence intervals. As depicted below, the final sample exceeds the size needed for less than 4% MOE in the study's conclusions.

<sup>85</sup> This includes responses from Davis Research Group.

<sup>86</sup> Data Source: Census Bureau. American Community Survey. 2013-2017. Adults (16+ years old) who are residents of Stanislaus County and working; Includes Stanislaus residents employed outside of the County.

<sup>87</sup> Data Source: U.S. Census Bureau. American Community Survey. 2013-2017. Adults (16+ years old) who are residents of Stanislaus County, working, and reported commuting for work.

<sup>88</sup> Data Source: Census Bureau's American Community Survey, updated through 2013-2017. The questions pertain to a person's journey to work in the past week since they took the survey.

<sup>89</sup> Data Source: State of California Employment Development Department. 2015. Stanislaus – County to County Commuting Estimates. Accessed from <https://www.labormarketinfo.edd.ca.gov/file/commute-maps/stanislaus2010.pdf>.

<sup>90</sup> Data Source: State of California Employment Development Department. 2015. Stanislaus – County to County Commuting Estimates. Accessed from <https://www.labormarketinfo.edd.ca.gov/file/commute-maps/stanislaus2010.pdf>.

## Appendix C: Detailed Research Methodology

RDA employed a mixed-methods approach that integrates both qualitative and quantitative data to best understand the status of commuters and the relationship between commuting and economic changes in Stanislaus County. This approach maximizes the validity of findings by leveraging perspectives from commuters and employers, primary data collected through commuter surveys, and labor market information using secondary databases to triangulate findings across data sources.

Data collection activities for this study are structured around the key research questions and associated sub-questions outlined in Figure 26.

**Figure 26: Key research questions**



## Data Sources

This study employed multiple data sources, including key informant interviews, surveys, and labor market data.

### Commuter Survey

The research team developed an extensive survey built on the tools and approaches used in prior studies [i.e., 2000 and 2006 Altamont Pass Commuter studies] to update prior findings as well as to examine current and emerging workforce and economic trends among commuters and businesses within Stanislaus County. The 2020 Commuter Study population included people who met the following inclusion criteria:

1. Resident of Stanislaus County
2. Between 18 and 64 years old
3. Make at least \$15k per year
4. Residential address [i.e., not P.O. box]
5. Resides in a zip code with an established population [i.e., not zero population]

In order to maximize the survey's reach, the research team and SCWD conducted rigorous marketing to recruit study participants through word-of-mouth referrals and announcements through websites, radio ads, geofencing, social media, and editorials in local newspaper. The survey was also administered in multiple formats and languages in order to be culturally inclusive and maximize accessibility. Each respondent was only allowed to complete the survey once.

**Table 26. Commuter survey sampling methods**

Survey Format	Survey Administration	Sampling Method	Surveys Completed [n=3,061]
<b>Paper</b>	RDA mailed English and Spanish surveys to approximately 115,000 randomly selected Stanislaus County residents throughout the County. The original list of randomly selected recipients for the paper survey included 119,273 addresses, however a random selection of addresses in rural areas was dropped in order to cull the 119,273 list down to 115,000. This means that people living in rural areas had a lower likelihood of being selected into the sample. Residents' addresses were obtained from a mailing list vendor, and the survey was administered in mail-back paper format.	Random Selection	40%
<b>Online</b>	RDA launched the Commuter Survey online through the project website <a href="https://stancocommute.com/">https://stancocommute.com/</a> . The survey was available in both English and Spanish. The online survey was advertised through social media, radio ads, and by online newspaper editorials. Geofencing along the I-580 corridor was used to target commuters traveling to and from the Bay Area for work, which allowed individuals to receive targeted ads on social media promoting the survey.	Convenience Selection	27%
<b>Email-Intercept</b>	RDA contracted with Davis Research Group to carryout email-intercept surveys. Known subscribers, who have agreed to complete surveys online on various topics, were contacted via email and screened for eligibility. Eligible subscribers were sent a link to take the online Commuter Survey. All respondents went through the same software portal that captured IP addresses to ensure no same person completed the survey twice. A similar process was also conducted to contact individuals via email through California voter roll database and engage them in the Commuter Survey.	Convenience & Random Selection	33%

In total, all survey formats obtained a final count of 3,061 survey responses, exceeding the ideal sample size necessary to make inferences about the population at a 95% confidence level

## Representativeness of Survey Respondents

For voluntary surveys, certain populations may be underrepresented in the data due to patterns of non-response. For instance, more people from a certain demographic group responded to the survey, while others did not. The research team conducted rigorous outreach and marketing in order to recruit as many diverse survey respondents as possible across Stanislaus County. However, there were likely subpopulations within Stanislaus County that did not respond to the survey. Thus, RDA employed a post-stratification weighting technique to ensure that the sample study population is representative of all residents across Stanislaus County. This method involved applying a weight to each survey response based on the population density in their zip code of residency. Through this approach, individuals residing in zip codes with a smaller number of survey respondents are still proportionally represented by the survey results compared to survey respondents from more populous zip codes. The weighting technique ultimately reduces the potential for bias in the results making the conclusions drawn from survey data reflective across the entire commuter population of Stanislaus County.

## Survey Data Analysis

RDA analyzed survey data to describe the number of responses by employment, travel mode, trip characteristics, demographics, and propensity to change to a job closer to home, calculating frequencies and percentages. RDA also conducted bivariate and multivariate inferential statistics to explore trends in these indicators using the following tests:

**Table 27. Statistical methods employed for the study**

Statistical Test	Example
<b>Chi-Squared Test:</b> A statistical test for detecting significant associations between categorical variables.	Is there a significant association between age group and willingness to take a job closer to home?
<b>Fisher Exact Test:</b> A statistical test for detecting significant associations between categorical variables when there was a small sample size within subgroups [i.e., one or more cell counts were less than five].	Is there a significant association between occupation and willingness to take a job closer to home?
<b>Multivariate Logistic Regression:</b> A statistical method to detect significant associations between a binomial categorical variable and a predictor variable, controlling for a set of conditions measured by covariates [such as demographic or socioeconomic factors].	Is there a significant association between industry and willingness to take a job closer to home, controlling for education level, age, commute distance, and race and ethnicity?
<b>T-Test:</b> A statistical test for detecting if there is a significant difference between the average estimate for two groups.	Is there a significant difference in commute distance among Out-of-County commuters compared to local commuters?

These analyses enabled RDA to provide SCWD with data-driven characterizations of the County's commuting workforce as a whole, along with comparisons to the non-commuting population. This type of inferential analysis, paired with significance testing, is critical for decision makers when developing actionable workforce policy that is responsive to longitudinal trends.

## Key Informant Interviews

The research team conducted interviews with Stanislaus resident commuters and with employers to dive more deeply into key concepts explored by the commuter survey. The research team employed framework and content analysis to identify key themes regarding the evolving needs of Stanislaus County commuters and potential employers. This analytic approach allowed RDA to systematically process data from interviews to identify patterns and themes that correspond to findings from other data sources.

### Interviews with Commuters

The research team conducted 23 telephone interviews with commuters to better understand their commute experiences, the impact that commuting has on their quality of life, and the factors they would consider for taking a job closer to home. Commuters who participated in the interviews were randomly selected from the list of respondents to the online or paper-based commuter survey.

### Interviews with Employers

The research team also conducted three interviews with representatives from medium-sized businesses in order to develop a nuanced understanding of how employers identify potential sites for their business operations and assess talent for recruitment efforts. The employers represented a breadth of site location choices, such as a company exclusively located in San Francisco, a company headquartered in a rural county with offices in San Francisco, and a company headquartered in San Francisco with satellite locations in suburban or rural areas. Interviewees were identified through referral sampling.

## Labor Market Data

RDA also collected and analyzed labor market data to develop a baseline understanding of the County's demographic profile and to identify trends, gaps, and opportunities in Stanislaus County's current workforce and economic outlook. The research team explored these trends using JobsEQ®, a proprietary technology platform for labor market analytics and economic research developed by Chmura Economics and Analytics.<sup>91</sup> JobsEQ supports public agencies such as SCWD to identify unique workforce characteristics, quickly acquire current industry and demographic trends, and hone in on targeted occupation and labor market information.

The research team acquired and employed this tool to integrate data from multiple public sources, including the Bureau of Labor Statistics, the U.S. Census American Community Survey, among others. Appendix D details the full list of sources that are integrated in JobsEQ. Specifically, this study uses JobsEQ to display data for industries and occupations in Stanislaus County and the surrounding region for occupation level and industry level data. See Table 28 for a detailed explanation of how occupation and industry data are treated in this report.

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<sup>91</sup> For further information about the tool, visit the Chmura JobsEQ® website at: <http://www.chmuraecon.com/jobseq/>

**Table 28. Applications of occupation and industry data for the Commuter Study**

	Occupation Data	Industry Data
<b>What is it?</b>	<i>Occupation</i> refers to a specific task or set of tasks performed by a worker; a single occupation may be present in a variety of industries.	<i>Industry</i> refers to the type of firm for which a person works.
<b>What is it used for in this report?</b>	Occupation data are used to reflect positions and job preferences for individual commuters and residents in Stanislaus.	Industry data are used to describe the business and economic environment, including business growth and emerging industries.
<b>What is the classification system?</b>	Standard Occupational Classification [SOC] is a federal statistical standard used by the Bureau of Labor statistics to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of 867 detailed occupations according to their occupational definition.	North American Industry Classification System [NAICS] is a standard used by the Bureau of Labor statistics to in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS is a 2- through 6-digit hierarchical classification system, offering five levels of detail. Each digit in the code is part of a series of progressively narrower categories.
<b>What level of analysis is used?</b>	To facilitate classification, detailed occupations are combined to form 459 broad occupations, 98 minor groups, and 23 major groups. This study largely reports on the 23 major groups, referred to as 2-digit SOCs. The report otherwise specifies when different classifications are used.	This study largely reports on the broadest two-digit NAICS classifications. The report otherwise specifies when more detailed classifications are used.

It is worth noting that certain differences may arise when comparing labor market data from JobsEQ to demographic data from the U.S. Census. JobsEQ's data on employment largely derive from the Local Area Unemployment Statistics [LAUS]; as of 2018, the numbers of employed individuals in the American Community Survey of the U.S. Census Bureau were higher than the LAUS estimates in 31 states; this implies that the number of workers in Stanislaus may be slightly deflated compared to census estimates.

## Study Limitations

Findings from this study should be interpreted with consideration to the following limitations:

- **Timeline of Secondary Data.** Wherever possible, RDA utilized the most recent data to inform the study. Secondary data vary in publication updates and releases. Thus, trends described from secondary data sources may not reflect real-time trends.
- **Small Sample Sizes.** Some subpopulations within the study [e.g., specific race/ethnic groups and occupations] represented a small portion of the Stanislaus County population. As a result, these groups may have had small sample sizes in the survey which potentially increases the margin of error. To account for any unreliability due to low sample size, the research team utilized Fisher's exact statistical testing and triangulated findings across multiple data sources to ensure more accurate results.
- **Reliability of Self-Reported Data.** Most of the primary data in this study are based on self-reported data from surveys, focus groups, and interviews. Different factors come into play that can influence the validity of self-reported data. Recall timeframe could become an issue when participants under-report or over-report information due to a lapse in time. The reliability of self-reported data may also become an issue if participants provide false information because they want to present themselves in what they perceive to be a socially acceptable manner. Despite these limitations, direct feedback about commuters' experiences and challenges is an integral and invaluable part of this study. The research team triangulated findings across multiple data sources to ensure accurate results and account for potential biases.
- **Comparability.** RDA will compare findings from the 2019 survey with the 2000 and 2006 surveys. To the degree possible, RDA designed survey questions to be comparable. However, many contextual and historical factors may impact workforce and commuting trends, which may not be reflected in the trend analysis. In addition, the 2000 and 2006 surveys obtained data from commuters across the San Joaquin Valley region whereas the 2019 survey obtained data exclusively from Stanislaus County residents. Where possible, the research team triangulated multi-year findings across multiple data sources to ensure accurate results.

## Appendix D. Data Sources Included in JobsEQ

Table 29. Secondary data collected from JobsEQ

Data Source	Datasets
<b>Bureau of Economic Analysis</b>	<ul style="list-style-type: none"> <li>State and Local Area Personal Income</li> <li>Input-Output Accounts</li> </ul>
<b>Bureau of Labor Statistics</b>	<ul style="list-style-type: none"> <li>Current Employment Statistics (CES)</li> <li>Employment Cost Index (ECI)</li> <li>Educational Attainment by Occupation</li> <li>Employment Projections (EP)</li> <li>Industry Employment Projections</li> <li>Local Area Unemployment Statistics (LAUS)</li> <li>National Employment Matrix</li> <li>Occupation Employment Projections</li> <li>Occupational Employment Statistics (OES)</li> <li>Occupation Separation Data</li> <li>Occupation Education and Training Requirements</li> <li>Quarterly Census of Employment and Wages (QCEW)</li> <li>State and Metro Area Employment, Hours, and Earnings</li> </ul>
<b>National Transportation Research Center</b>	<ul style="list-style-type: none"> <li>Travel Statistics</li> </ul>
<b>Census Bureau</b>	<ul style="list-style-type: none"> <li>American Community Survey (ACS)</li> <li>Commuting Patterns</li> <li>County Business Patterns (CBP)</li> <li>County-Level Demographic Data</li> <li>Current Population Survey (CPS)</li> <li>Educational Attainment by Age Cohort</li> <li>Longitudinal Employer-Household Dynamics (LEHD)</li> <li>Nonemployer Statistics</li> <li>Population (Overall and by Age Cohort)</li> <li>Population Projections</li> <li>Quarterly Workforce Indicators (QWI)</li> <li>Summary Statistics (poverty, housing, labor force, and others)</li> <li>"Guidance for Labor Force Statistics Data Users"</li> </ul>
<b>Council for Community and Economic Research</b>	<ul style="list-style-type: none"> <li>Cost of Living Index</li> </ul>
<b>Department of Defense</b>	<ul style="list-style-type: none"> <li>Military Exits</li> </ul>
<b>Employment and Training Administration</b>	<ul style="list-style-type: none"> <li>Foreign Labor Certifications</li> </ul>
<b>National Center for Education Statistics</b>	<ul style="list-style-type: none"> <li>CIP-SOC Crosswalk</li> <li>Higher Education Awards</li> <li>Institutional Characteristics</li> </ul>
<b>O*Net™ [Occupational Information Network]</b>	<ul style="list-style-type: none"> <li>Worker Attributes</li> <li>Related Occupations</li> </ul>

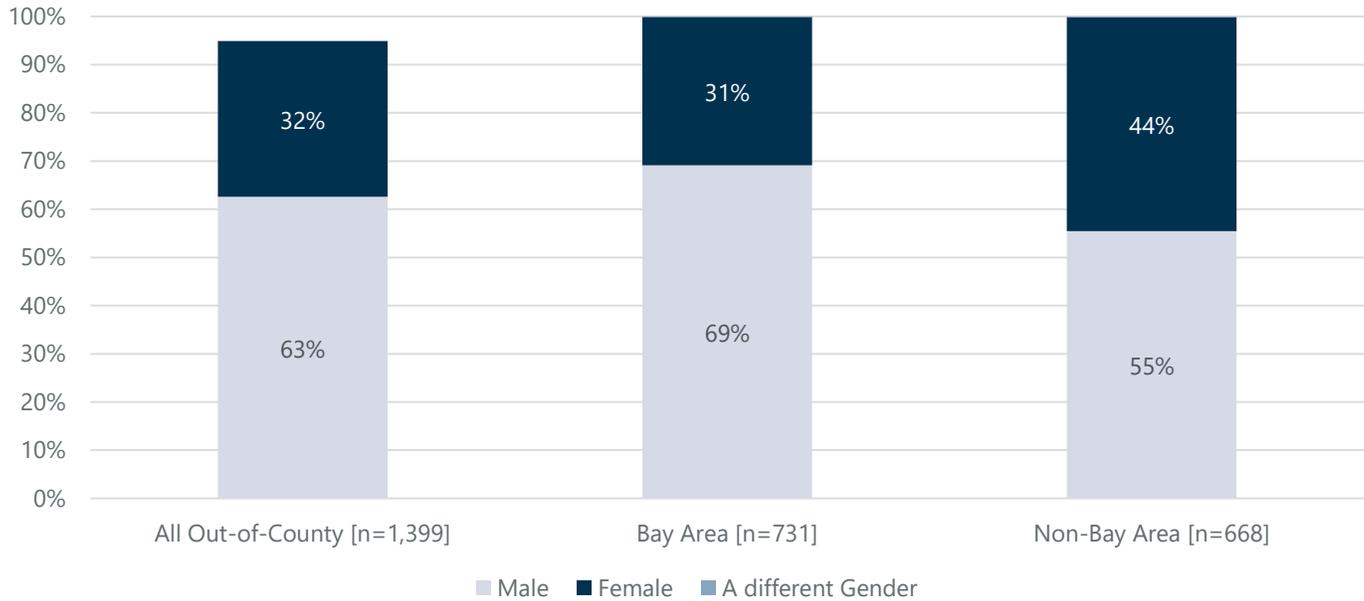
**Social Security Administration**

- State Employment Agencies (coverage and availability vary by state)
- Career Readiness Certificates
- Characteristics of the Unemployed (ES-203) Employment and Wages
- Regional Occupation Employment Statistics and Projections
- State Employment Agencies (coverage and availability vary by state)
- Career Readiness Certificates
- Characteristics of the Unemployed (ES-203) Employment and Wages
- Regional Occupation Employment Statistics and Projections

## Appendix E. Commuter Demographic Profile for Out-of-County Commuters

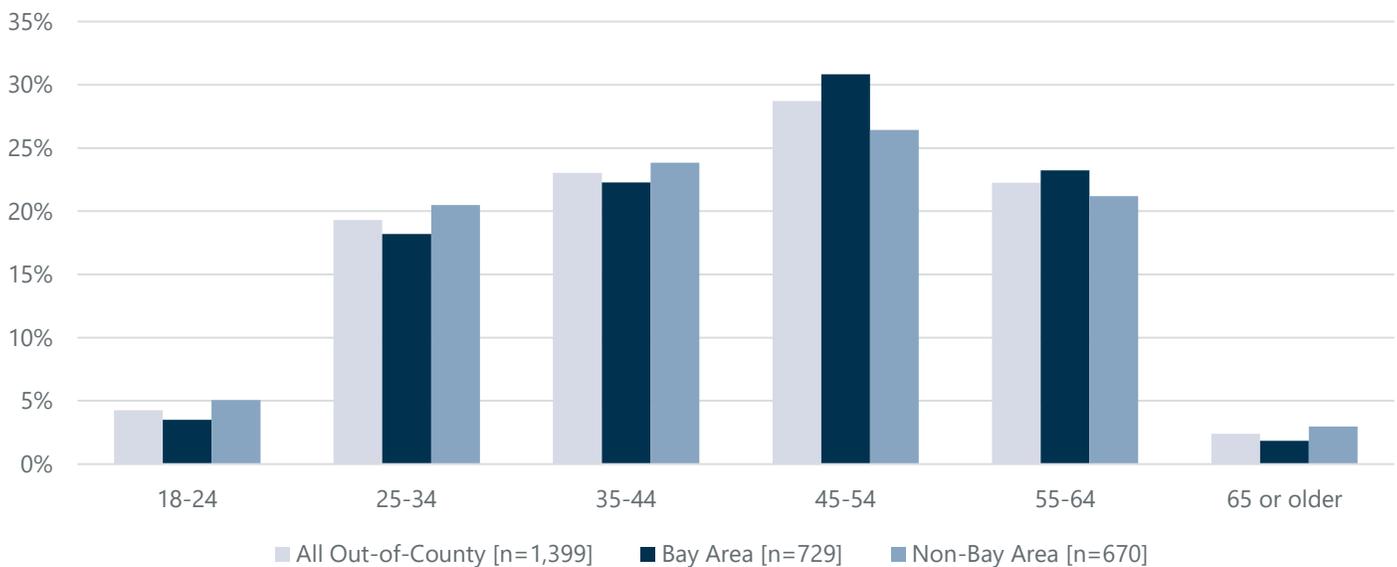
### Gender

Figure 27. Out-of-County commuter gender comparison by commute destination



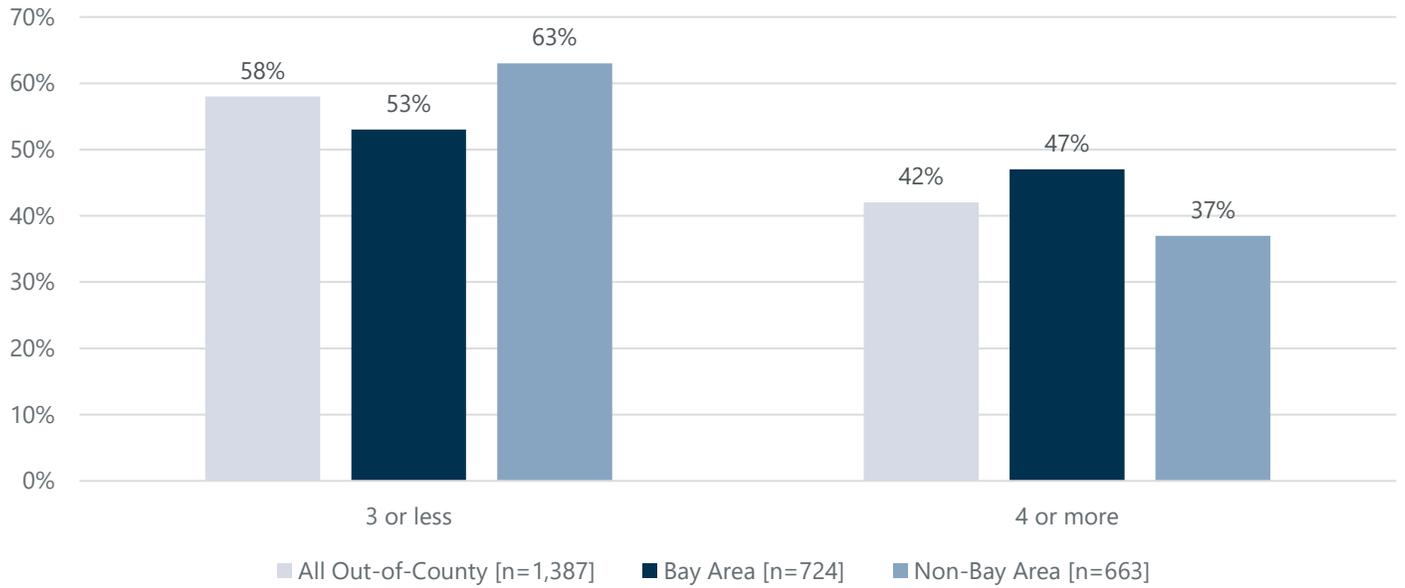
### Age

Figure 28. Out-of-County commuter age range comparison by commute destination



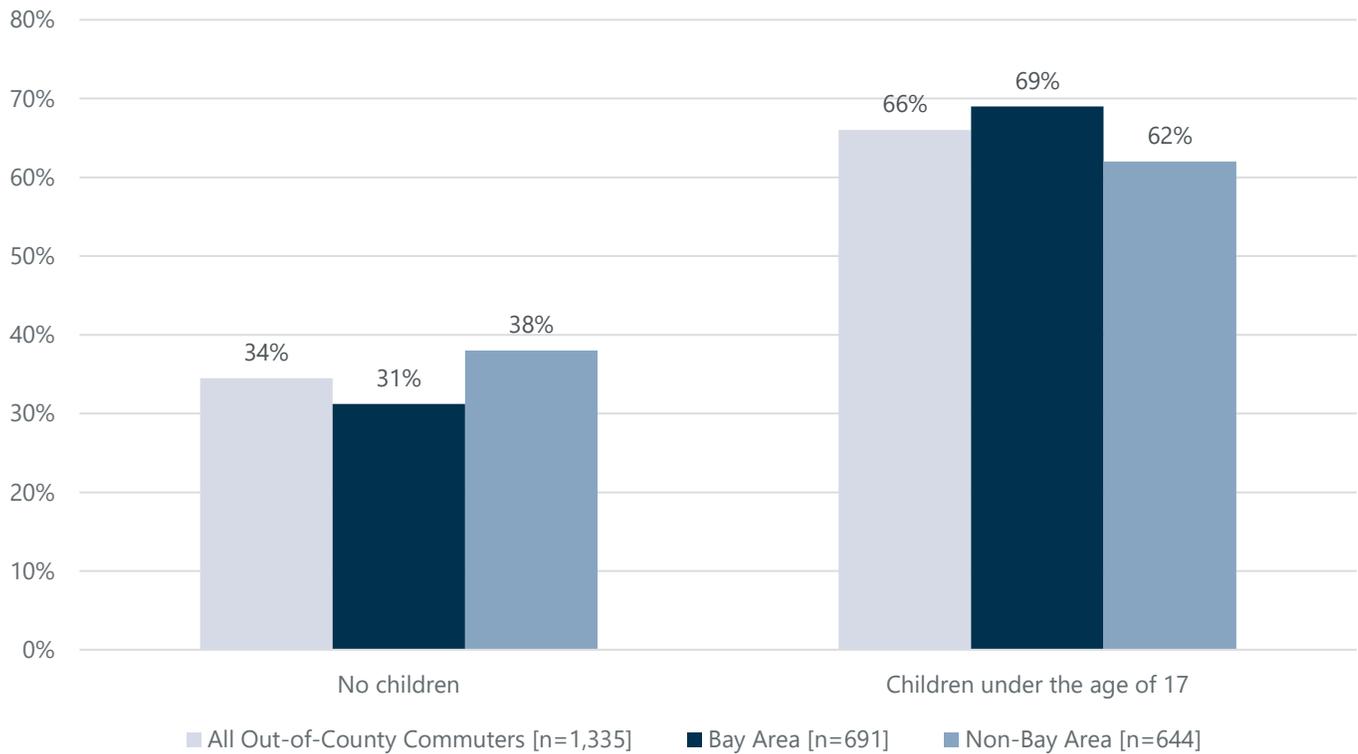
## Household Size

Figure 29. Out-of-County commuter household size comparison by commute destination



## Children

Figure 30. Out-of-County commuters with and without children comparison by commute destination



## Education Level

Figure 31. Out-of-County commuters' education attainment comparison by commute destination

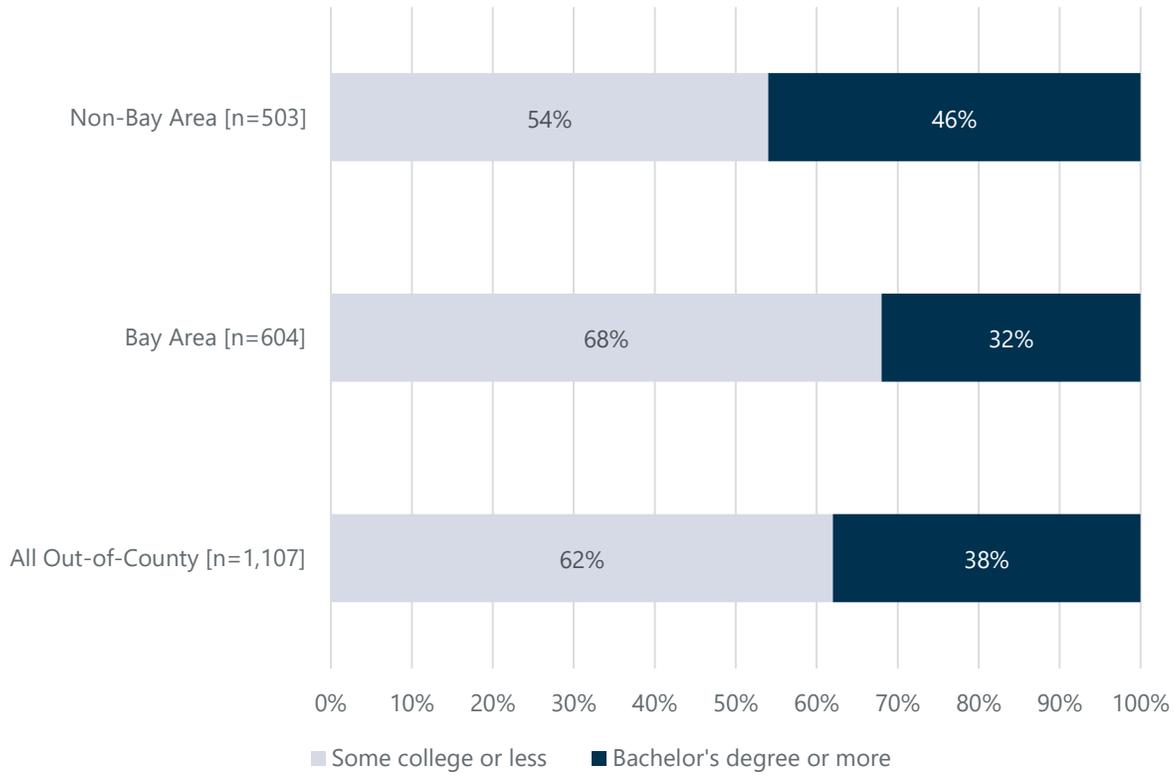


Table 30. Demographic characteristics of Bay Area commuters and non-Bay Area commuters

Characteristics <sup>92</sup>	% Bay Area Commuters	% Non-Bay Area Commuters
<b>Gender*</b>	[n=731]	[n=668]
Male	69%	55%
Female	31%	44%
A different gender	0%	0%
<b>Age</b>	[n=729]	[n=670]
18-24	4%	5%
25-34	18%	20%
35-44	22%	24%
45-54	31%	22%
55-64	23%	21%
65+	2%	3%
<b>Ethnicity*</b>	[n=720]	[n=658]
Not Hispanic	59%	70%
Hispanic	41%	30%
<b>Race</b>	[n=738]	[n=673]
Asian	7%	4%
Black*	6%	3%
Native American/ Alaskan Native	4%	3%
White*	57%	73%
Other*	25%	16%
<b>Veteran</b>	8%	10%
	[n=730]	[n=671]
<b>Tenure at current company</b>	[n=746]	[n=674]
< 1 year	12%	13%
1-3 years	24%	22%
4-5 years	12%	17%
6-10 years	14%	13%
10+ years	39%	34%
<b>Benefits</b>	[n=750]	[n=678]
401k	67%	63%
PTO or leave time	65%	65%
Flexible working hours	32%	27%
Insurance and medical benefits	100%	100%
Stocks/bonuses*	26%	17%
Tips or commission	5%	4%

<sup>92</sup> Asterisk indicates significant difference between Bay Area and non-Bay Area commuters.

Transportation benefits	100%	100%
<b>Tenure in current home</b>	[n=737]	[n=673]
Less than a year	5%	6%
1-3 years	24%	17%
3-5 years	14%	16%
5-10 years	18%	19%
10 or more years	38%	42%
<b>Home owner</b>	74%	72%
	[n=722]	[n=667]
<b>Education*</b>	[n=604]	[n=503]
Less than high school graduate	7%	5%
High school graduate	24%	18%
Some college or associate's degree	36%	33%
Bachelor's degree	17%	22%
Graduate or professional degree	10%	18%
Other	5%	4%
<b>Marital Status</b>	[n=735]	[n=672]
Married	62%	59%
Single	22%	24%
Widowed	1%	2%
Divorced	9%	10%
Domestic Partnership	6%	5%
<b>Children Under Their Care</b>	[n=691]	[n=644]
6 years old or younger	19%	20%
6-12 years old	27%	23%
13-17 years old*	23%	18%
None	31%	38%

Table 31. Demographic characteristics of Out-of-County commuters

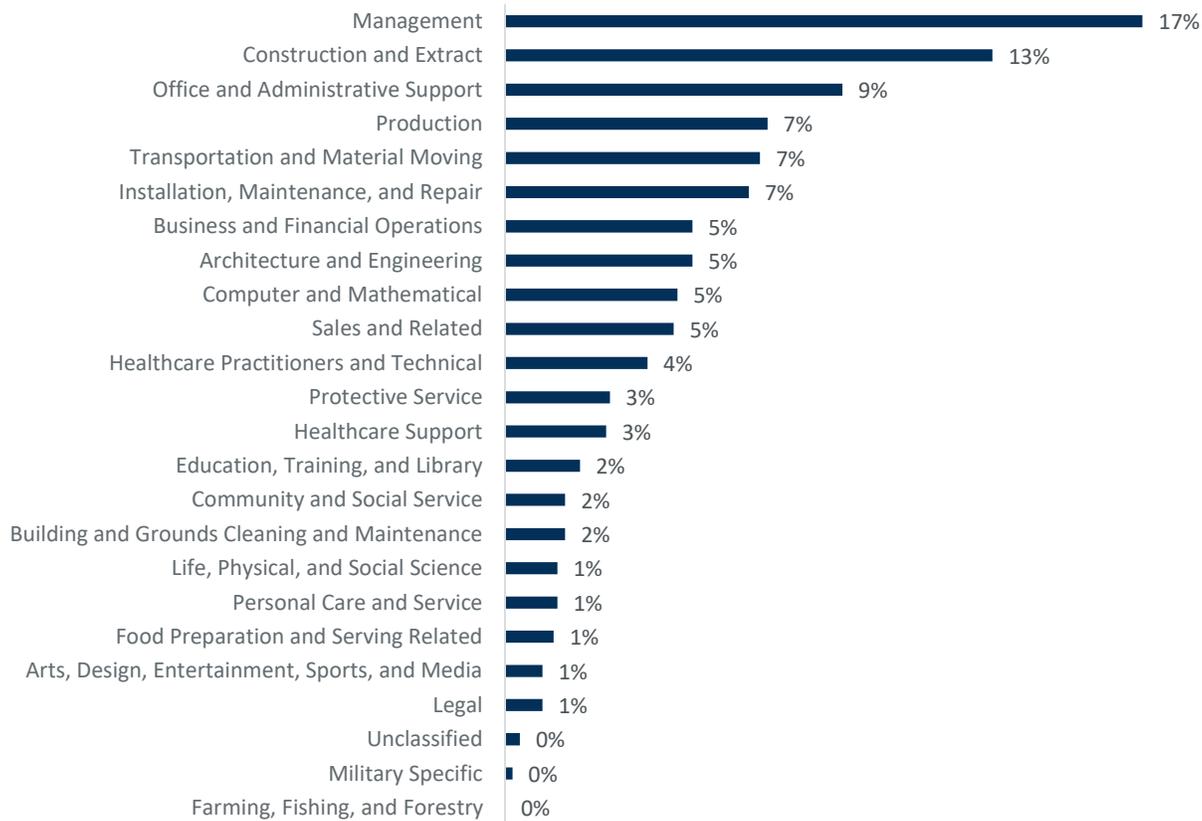
Characteristics <sup>93</sup>	% of Out-of-County Commuters [n=1,464]
<b>Gender*</b>	
Male	63%
Female	37%
<b>Age*</b>	
18-24	4%
25-34	19%
35-44	23%
45-54	29%
55-64	23%
65+	3%
<b>Ethnicity</b>	
Not Hispanic	65%
Hispanic	35%
<b>Race</b>	
Asian	6%
Black	5%
Indian	3%
White	64%
Other	20%
<b>Veteran*</b>	9%
<b>Tenure at current job</b>	
< 1 year	12%
1-3 years	23%
4-5 years	14%
6-10 years	14%
10+ years	37%
<b>Benefits</b>	
401k*	60%
PTO or leave time*	59%
Flexible working hours	29%
Insurance and medical benefits	100%
Stocks/bonuses*	20%
Tips or commission	5%
Transportation benefits	100%
<b>Tenure in current home</b>	

<sup>93</sup> Asterisk indicates significant difference between Out-Commuters vs. In-Commuters.

Less than a year	6%
1-3 years	21%
3-5 years	15%
5-10 years	18%
10 or more years	40%
<b>Homeowner*</b>	72%
<b>Education*</b>	
Less than high school graduate	6%
High school graduate	21%
Some college or Associate degree	35%
Bachelor's degree	20%
Graduate or professional degree	14%
Other	4%
<b>Married*</b>	60%
<b>Children Under Their Care</b>	
6 years old or younger*	24%
6-12 years old*	29%
13-17 years old	25%
None	50%

## Appendix F. Commuter Employment and Commute Profiles

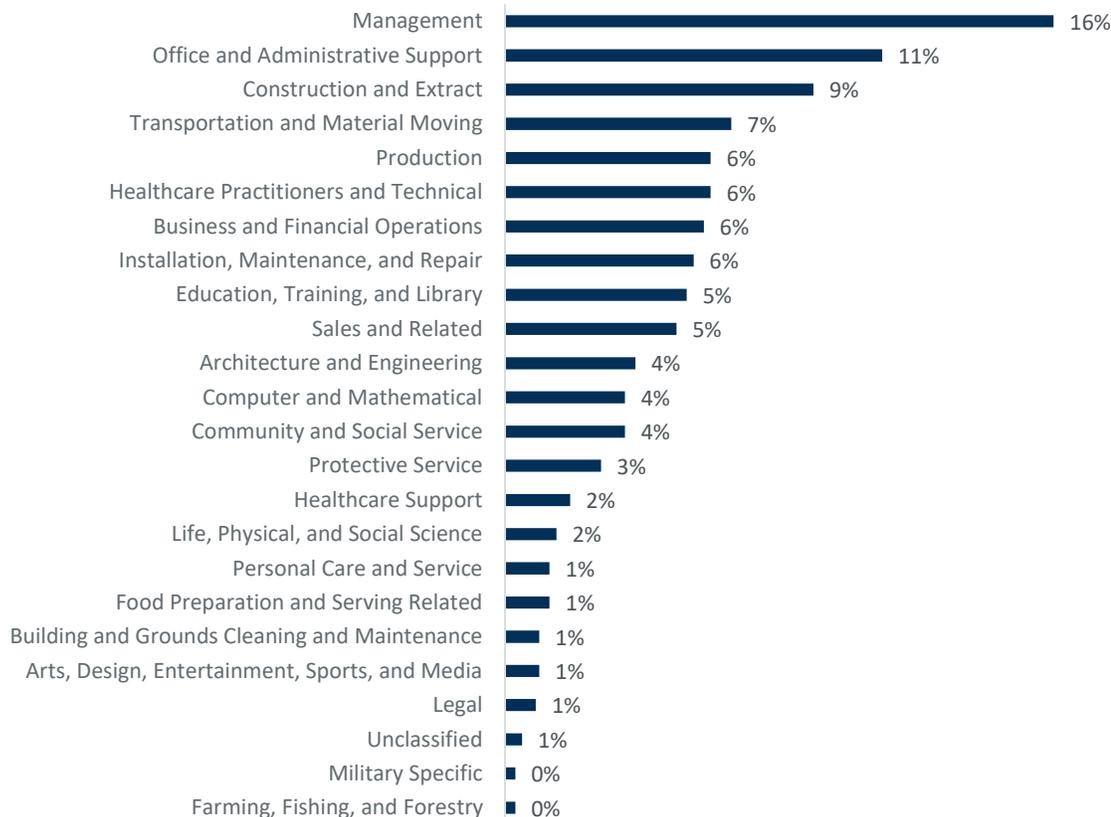
**Figure 32. Bay Area commuter occupations [n=745]**



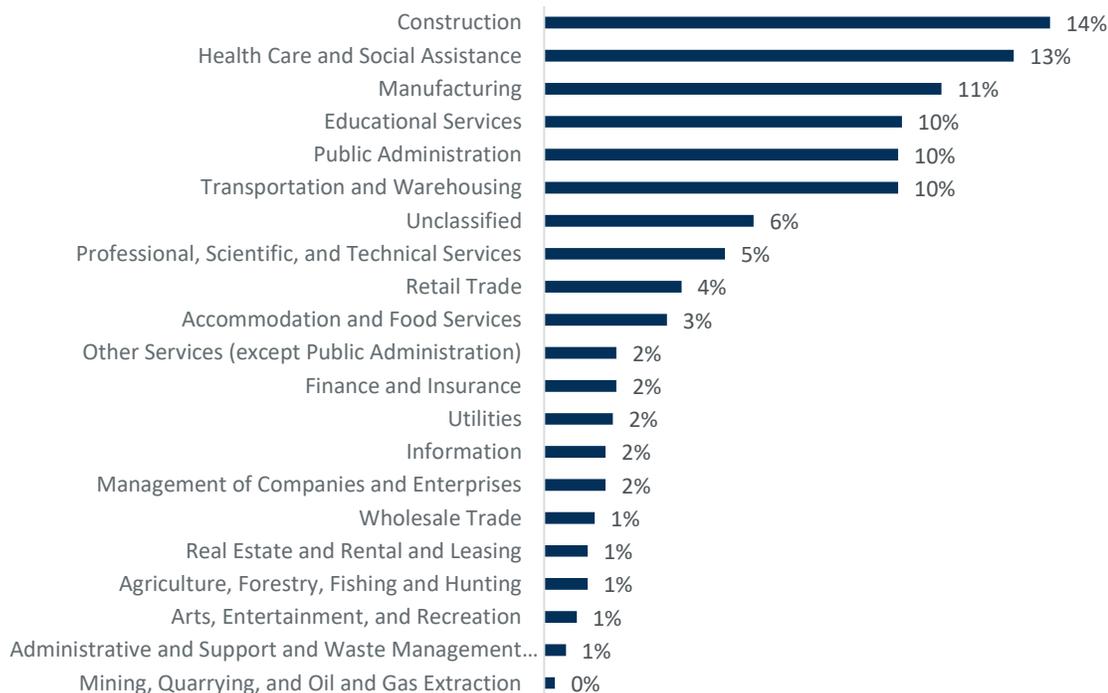
**Figure 33. Bay Area commuter industries [n=672]**



**Figure 34. Out-of-County commuter occupations [n=1,417]**



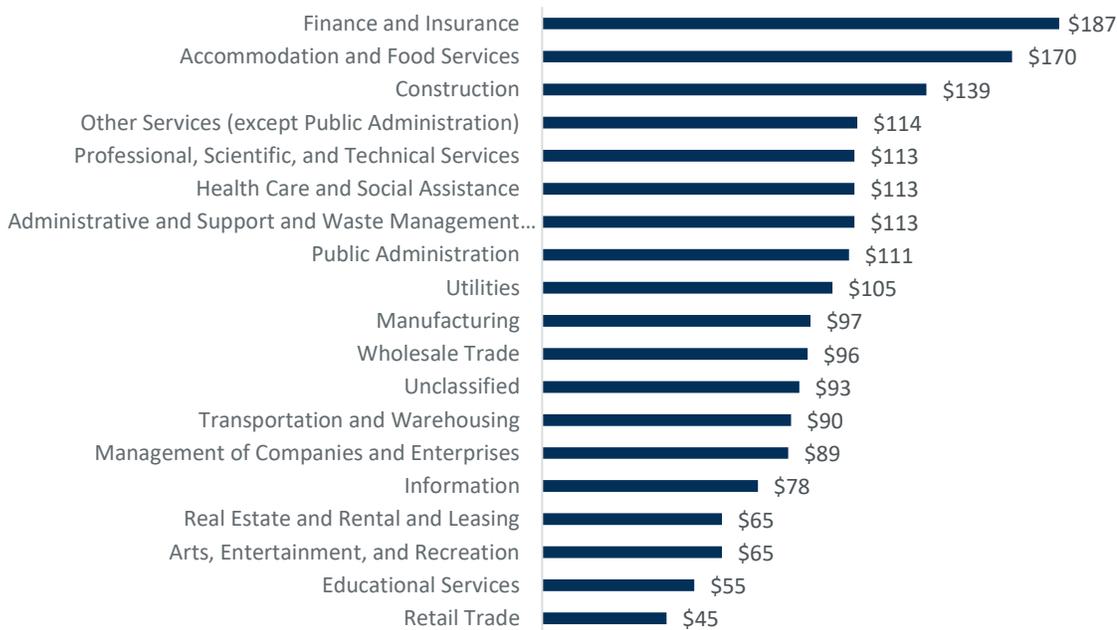
**Figure 35. Out-of-County commuter industries [n=1,298]**



**Figure 36. Out-of-County commute cost per week by occupation [n=433]**



**Figure 37. Out-of-County commute cost per week by industry [n=433]**



## Appendix G. Out-of-County Commute Destinations

**Table 32. Out-of-County commuter destination by county**

Destination County	% of Out-of-County Commuters [n=1,464]
Alameda County	25.4%
Amador County	0.1%
Calaveras County	0.2%
Contra Costa County	4.5%
Fresno County	0.6%
Glenn County	0.1%
Kanawha County	0.1%
La Paz County	0.1%
Los Angeles County	0.1%
Madera County	0.3%
Marin County	0.3%
Mariposa County	0.1%
Merced County	8.2%
Monterey County	0.6%
Napa County	0.2%
Placer County	0.3%
Sacramento County	3.6%
San Benito County	0.1%
San Bernardino County	0.1%
San Francisco County	4.9%
San Joaquin County	29.6%
San Mateo County	4.3%
Santa Clara County	12.8%
Santa Cruz County	0.1%
Solano County	0.2%
Sonoma County	0.2%
Tulare County	0.1%
Tuolumne County	2.3%
Ventura County	0.1%
Yolo County	0.4%
<b>Grand Total</b>	<b>100%</b>

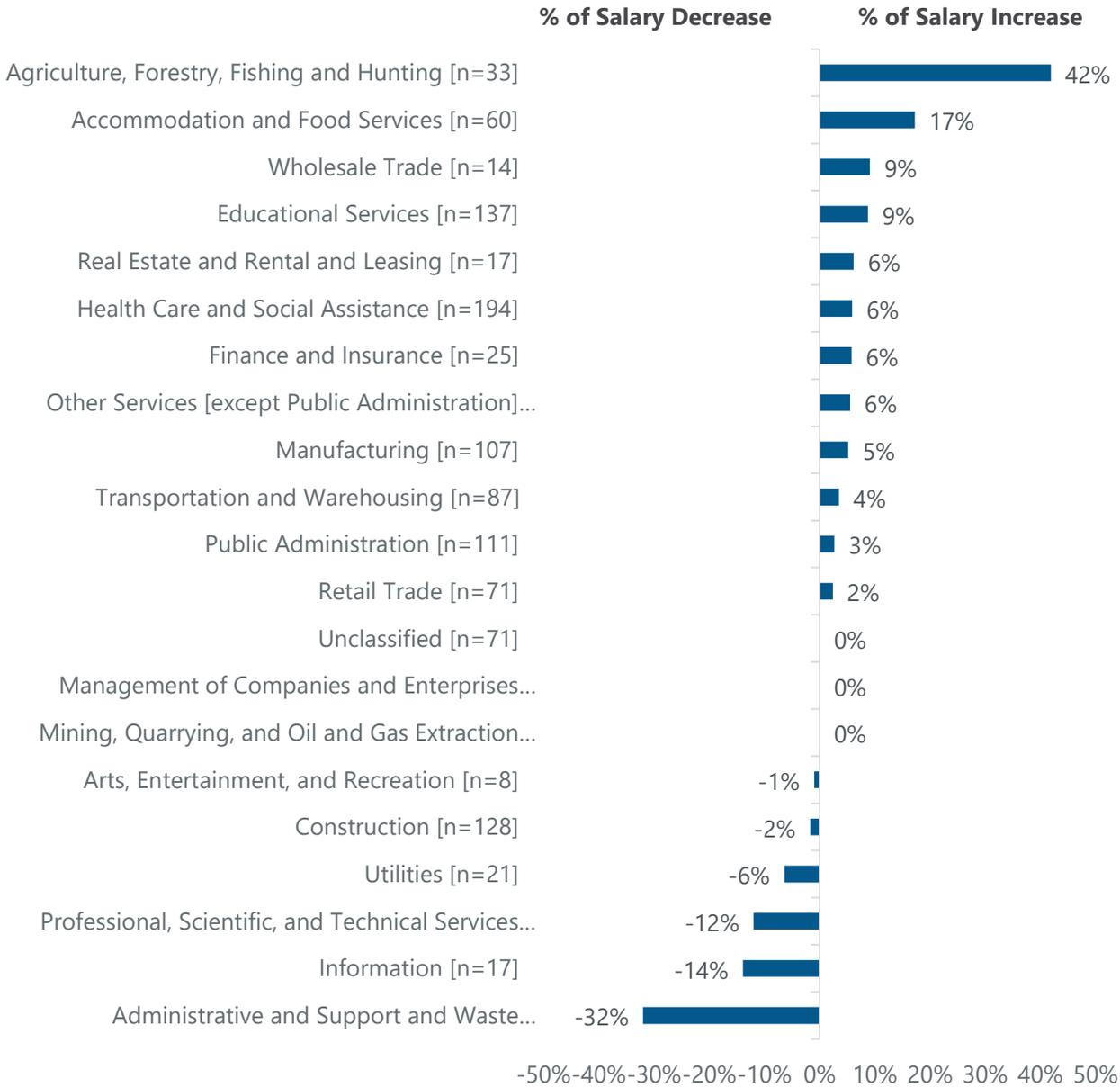
## Appendix H. Out-of-County Commute Origin Cities

**Table 33. Out-of-County commuter trip origin by city**

City of Trip Origin	% of Out-of-County Commuters [n=1,461]
Atwater	0%
Ceres	8%
Crows Landing	0%
Denair	1%
Empire	0%
Hickman	0%
Hughson	1%
Keyes	1%
La Grange	0%
Livingston	0%
Manteca	1%
Modesto	49%
Newman	3%
Oakdale	5%
Oakley	0%
Patterson	7%
Ripon	0%
Riverbank	5%
Salida	4%
San Jose	0%
Tracy	0%
Turlock	12%
Unknown	0%
Waterford	2%
<b>Grand Total</b>	<b>100%</b>

## Appendix I. Salary Change and Job Propensity

**Figure 38. Percent change in salary needed to motivate an out-of-county commuter to change to a job closer to home, by industry**



## Appendix J. All Occupations and Industries of Commuters Surveyed

**Table 34. Occupation distribution by commuter sub-populations**

Occupation	All Out-of-County [n=1,419]	Bay Area [n=745]	Non-Bay Area [n=674]
Management	16%	17%	16%
Business and Financial Operations	6%	5%	7%
Computer and Mathematical	4%	5%	2%
Architecture and Engineering	4%	5%	3%
Life, Physical, and Social Science	2%	1%	2%
Community and Social Service	4%	2%	6%
Legal	1%	1%	1%
Education, Training, and Library	5%	2%	9%
Arts, Design, Entertainment, Sports, and Media	1%	1%	1%
Healthcare Practitioners and Technical	6%	4%	9%
Healthcare Support	2%	3%	1%
Protective Service	3%	3%	3%
Food Preparation and Serving Related	1%	1%	1%
Building and Grounds Cleaning and Maintenance	1%	2%	1%
Personal Care and Service	1%	1%	1%
Sales and Related	5%	4%	5%
Office and Administrative Support	11%	9%	14%
Farming, Fishing, and Forestry	0%	0%	1%
Construction and Extract	9%	13%	4%
Installation, Maintenance, and Repair	5%	7%	4%
Production	6%	7%	5%
Transportation and Material Moving	7%	7%	6%
Military	0%	0%	0%
Unspecified	0%	0%	1%

Table 35. Industry distribution by commuter sub-populations

Industry	All Out-of-County [n=1,298]	Bay Area [n=672]	Non-Bay Area [n=626]
Agriculture, Forestry, Fishing and Hunting	1.3%	1%	2%
Mining, Quarrying, and Oil and Gas Extraction	0.3%	1%	0%
Utilities	1.9%	3%	1%
Construction	13.4%	18%	8%
Manufacturing	11.0%	14%	8%
Wholesale Trade	1.4%	1%	2%
Retail Trade	3.9%	3%	5%
Logistics/ Warehousing	9.8%	9%	11%
Information	1.6%	2%	1%
Finance and Insurance	2.1%	2%	2%
Real Estate and Rental and Leasing	1.1%	1%	1%
Professional, Scientific, and Technical Services	5.1%	7%	3%
Management of Companies and Enterprises	1.7%	1%	3%
Administrative and Support and Waste Management and Remediation Services	0.6%	1%	0%
Educational Services	9.9%	5%	16%
Health Care and Social Assistance	12.8%	12%	14%
Arts, Entertainment, and Recreation	0.9%	1%	0%
Accommodation and Food Services	3.4%	3%	4%
Other Services (except Public Administration)	2.0%	2%	2%
Public Administration	10.0%	7%	13%
Unspecified	5.8%	8%	4%

## Appendix K. Top 10 Industries and Occupations Matrices for Commuters

Numeric value indicates the industry or occupation rank within that commuter population's Top 10 list.

**Table 36. Top 10 commuter industries by commuter sub-populations**

Industry	All Out-of-County [n=1,298]	Bay Area [n=672]	Non-Bay Area [n=626]
Construction	1	1	6
Health Care and Social Assistance	2	3	2
Manufacturing	3	2	5
Public Administration	4	6	3
Educational Services	5	7	1
Logistics/ Warehousing	6	4	4
Professional, Scientific, and Technical Services	7	5	10
Retail Trade	8	8	7
Accommodation and Food Services	9	9	8
Finance and Insurance	10		
Utilities		10	
Management of Companies and Enterprises			9

**Table 37. Top 10 commuter occupations by commuter sub-populations**

Occupation	All Out-of-County [n=1,419]	Bay Area [n=745]	Non-Bay Area [n=674]
Management	1	1	1
Office and Administrative Support	2	3	2
Construction and Extract	3	2	
Transportation and Material Moving	4	5	6
Healthcare Practitioners and Technical	5		3
Production	6	4	8
Business and Financial Operations	7	7	5
Installation, Maintenance, and Repair	8	6	10
Education, Training, and Library	9		4
Sales and Related	10	10	9
Architecture and Engineering		8	
Computer and Mathematical		9	
Community and Social Service			7