

## CENTER FOR CONTINUING STUDY OF THE CALIFORNIA ECONOMY

385 HOMER AVENUE • PALO ALTO • CALIFORNIA • 94301

TELEPHONE: (650) 321-8550

FAX: (650) 321-5451

[www.ccsce.com](http://www.ccsce.com)

DATE: July 25, 2017

TO: **Garett Ballard-Rosa**

FROM: Stephen Levy

SUBJECT: Sensitivity and Economic Competitiveness Analysis—What can Move the Needle on SACOG's Job Share

SACOG staff has identified several sensitivity and economic competitiveness areas of interest and the forecast analysis has identified additional areas. This memo addresses these topics with the goal of understanding what would make a significant change in the share of state and national jobs locating in the region.

This memo should be read along with the memo explaining the key assumptions underlying the range of job, population and household projections. The two memos serve as the starting point for discussion with stakeholder groups and the SACOG Board.

### **CCSCE Summary Takeaways**

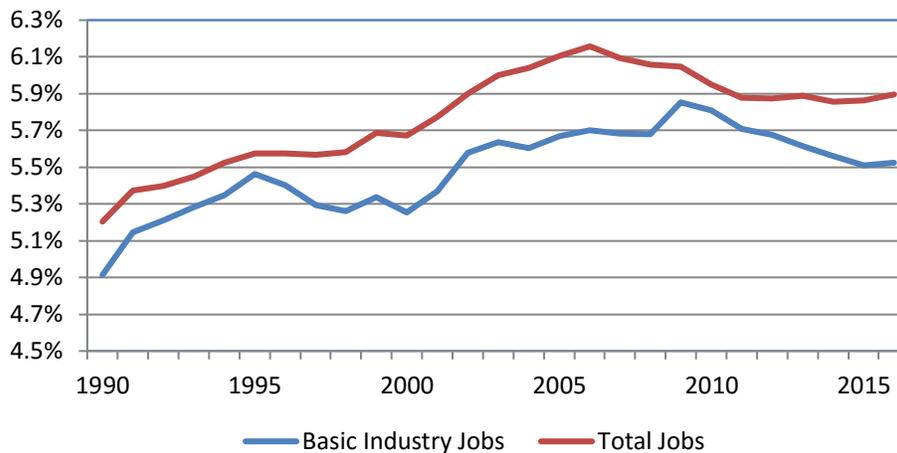
1. Increasing the supply of housing and at reasonably affordable prices/rents and in locations desired by potential residents is critical to achieving the baseline job growth forecast and even more critical for the staff recommended job projection. A housing cost advantage is of limited benefit if supply is lacking.
2. Expanded and faster Capitol Corridor or other non-auto commuting options are essential to take advantage of potential mega-region opportunities.
3. In terms of potential opportunities for faster job growth, CCSCE views professional and information services are the most promising target sectors followed by activities associated with expanded state planning and initiatives in areas like transportation, climate change and health care.

## Background: The Challenges to Achieving Stronger Job Growth

There are two current data points that highlight the challenges facing the region for achieving stronger job growth.

After many years of above average growth in the region's economic base—those sectors providing goods and services to customers outside the region—the SACOG economic base is ending a decade of average to below average job growth with few sectors that grew faster than the state. The region's share of state basic industry jobs fell from 5.7% in 2007 to 5.5% in 2016 after increasing from 4.9% in 1990 to 5.7% in 2007. Total job share trends followed the same pattern peaking after 2005 and then declining slightly to 2016.

### SACOG Region Share of State Jobs



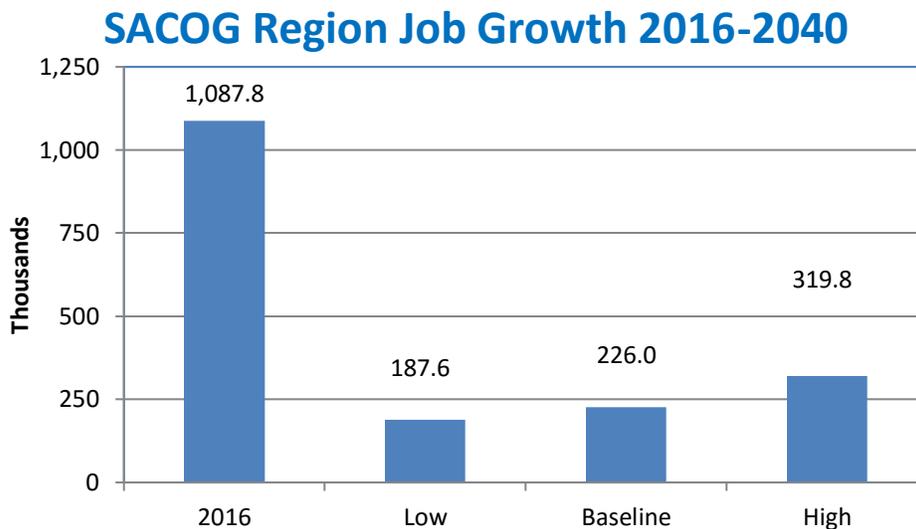
The second challenging trend is the dominance of state government (with average to below average growth prospects) in the region's economic base. More than 1/3 of the region's economic base (133,200 jobs) in 2016 was in the basic government sector dominated by state government and education jobs. By contrast just 11.5% of state basic jobs were in this sector. As a result the SACOG region had a below average share of basic industry jobs in all of the other major basic industry categories. The region had 88,000 state government jobs, 29,500 state education jobs (mainly the two large public universities) and 15,700 federal government jobs.

Structure of SACOG and CA Economic Base  
 (Percent of Jobs by Major Category)  
 2016

	SACOG Jobs(000)	SACOG Share	CA
High Tech Manuf.	7.8	2.1%	6.0%
Divs. Manuf.	29.4	7.9%	12.8%
Wholesale Trade & Transp.	54.1	14.6%	18.6%
Prof, Bus & Info Serv.	103.2	27.9%	33.3%
Tourism & Ent	26.5	7.2%	10.4%
Basic Government	133.2	36.0%	11.5%
Resource Based	15.9	4.3%	7.5%
<b>Total Basic Jobs</b>	<b>370.1</b>	<b>100.0%</b>	<b>100.0%</b>

Source: EDD and CCSCE

**A Brief Summary of the Draft Job Projection Scenarios to 2040**



A separate memo describes the projections in more detail. The highlights are:

- The baseline projections assume that regional shares of state jobs remain near current levels. The 2040 share of state jobs is 6.0% and the projection implies job growth of 226,000 or 20.8%
- The low projection assumes lower national and state job growth, a regional share of state jobs at 6.0% and job growth of 187,600 or 17.2%.

- The high projection assumes slightly higher state job growth, an increase in the regional share in 2040 to 6.5% resulting in job growth of 319,800 or 29.4%.
- The expert panel, regional industry forecasters, economic development and other stakeholder groups reviewed these projections series. Based on this feedback on regional competitive positioning, the project team developed a projection series slightly above the baseline projection. The stakeholders noted that none of these job increases—even the 6.0% assumed in the baseline projection—are automatic. As such, the recommended projection series represents an assumption of policy success. The project team worked with these regional partners to explore what factors could support this projected job growth.

### **Major Areas of Opportunity for Job Growth**

For CCSCE, there are three major target areas:

- Starting/expanding homegrown clusters
- Getting a larger share of Bay Area spinoff growth
- Becoming a larger home for commuters to the Bay Area and getting their population serving jobs.

It is important to understand that the baseline job forecast has the region maintaining current shares of state jobs in key basic industries and that will require positive policy responses. The recommended job forecast has a slightly higher growth rate, which requires additional policies to support job growth.

### **Starting/Expanding Homegrown Clusters**

Stakeholders identified five “clusters of opportunity.” Some of these overlap between homegrown and Bay Area spinoff. The five clusters are 1) Ag and Food, 2) Life Sciences, 3) Advanced Manufacturing, 4) Clean Energy and 5) Education and Knowledge. Except for Ag and Food, none of these clusters correspond easily to industries where data and projections are available.

Based on growth trends CCSCE has recommended professional and information service also be included in the analysis.

The two other paths to increased job growth are easier to discuss and I will start with these—both of which go under the heading of capitalizing on the mega region connections identified in the Bay Area Council Economic Institute Mega Region report.

This opportunity has two major components:

- The SACOG region as a site for spillover Bay Area job growth
- The SACOG region as a site for commuting into the Bay Area

The commuting opportunity enhances job growth as the commuters will spend most of their money buying goods and services in the region.

These opportunity areas, in turn, depend on two primary factors, one of which is in place and one would need to be improved.

**The region does have a housing cost advantage compared to the Bay Area.**

Median resale home prices are one indicator of this advantage and, after narrowing in the early recession years, the gap has grown again to where median prices are roughly twice as high in the Bay Area compared to major SACOG region counties.

On the other hand additions to the housing supply in the SACOG region have not kept up with the lower population growth in recent years.

Staff provided data on inter regional commuting trends from the 2009-2013 American Community Survey. In that period 16,887 workers who lived in the Bay Area worked in the SACOG region with more than half coming from nearby Solano County. At the same time, 30,898 workers who lived in the region worked in the Bay Area with the largest number coming from Sacramento and Yolo counties into Solano County.

### Median Resale Home Prices

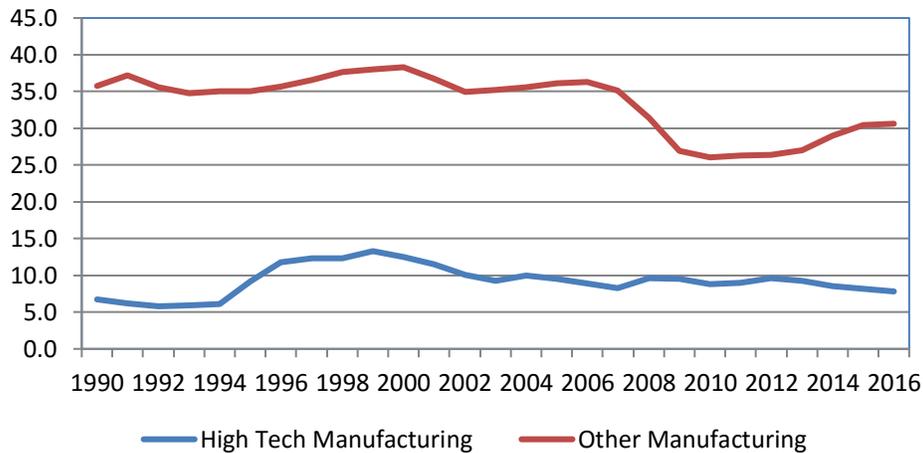


There was a time in the 1990s when tech manufacturing job growth surged in the region, partly as a result of a large housing cost differential. But high tech manufacturing jobs peaked in the 1990s, will further decline when Aerojet moves away and are not a job growth sector going forward. In addition overall jobs

levels in manufacturing are low with no significant increase recently or foreseeable given national and state trends.

The region’s manufacturing job history is better than the state and national trends where large manufacturing job losses occurred, but that does not translate into any substantial job growth in this sector going forward.

### Region Manufacturing Jobs (000s)



The table below shows the strong growth expected in the region (after a disappointing last ten years) with just keeping the region’s share of state job growth constant. Can the region develop policies that would lead to a larger share of state/Bay Area job growth in these sectors coming to the region?

#### SACOG Region

Jobs in Professional and Information Services  
(Thousands)

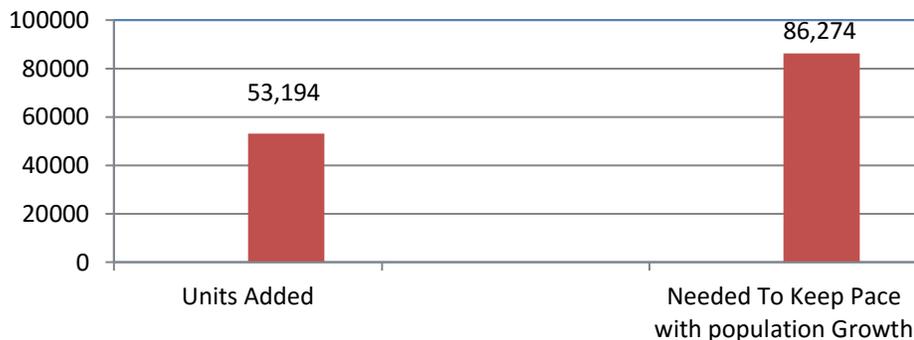
	1990	2007	2016	2040
Legal services	6.1	7.5	7.1	9.6
Accounting and bookkeeping services	4.8	5.2	4.7	7.1
Architectural and engineering services	5.0	10.7	9.3	12.8
Computer systems design and related services	2.6	9.6	11.1	15.8
Management and technical consulting services	1.9	9.3	8.7	16.0
Scientific research and development services	2.9	6.5	6.3	10.9
Other professional and technical services	5.1	7.7	7.8	10.6
Management of companies and enterprises	5.7	8.8	12.6	14.4
Employment services	6.4	20.0	24.4	29.5
Software publishers	0.2	0.7	1.1	1.5
Broadcasting, except Internet	2.1	2.6	2.7	2.5
Telecommunications	7.8	11.7	4.2	3.8
Internet Services	1.4	1.1	3.2	7.6

To date the region has not captured a share of the large Bay Area job growth in professional and information services, but job growth in these sectors is expected to be substantial.

Besides conventional “economic development” policies, there are three policy areas that seem critical to success in capturing a higher share of professional and information service job growth.

The first is to greatly increase the growth in the regional housing stock, to do so in a way that continues and enhances the housing cost advantage the region possesses AND to approve the kind of housing that will attract these workers to live in the region. A cost advantage means little for job growth if supply is limited. The region starts with a shortage that is at least as large as shown below and also will face large growth to keep pace with population growth as will be reflected in DOF and HCD projections to 2030.

## A Housing Shortage in the SACOG Region 2007-2016



Much of this is under local control including various ways to reduce the cost of building housing so prices/rents can be more affordable. Some ideas discussed in other regions include:

- Shorter and easier approval processes including some “by right” provisions for specific types and locations of housing’
- Reduced parking minimums (a large cost item)
- Increased density perhaps in conjunction with more BMR units
- Using state cap and trade monies to provide incentives for communities that approve housing or to backfill development fees so the cities get the money but the cost is not added to the project
- Changing other fiscal incentives for housing

## **Vigorous State Government Initiatives**

Some of the growth between 1990 and 2007 in professional services was attached to being close to and serving state government clients and projects. It was not all associated with high tech services.

The state agenda is not something under SACOG's control. On the other hand all regional leaders can add their voices to continued state leadership on issues like climate change, health care, water infrastructure, transportation innovations—all areas that can lead to job growth in assisting state government agencies to plan and implement future state initiatives.

## **Commuting into the Region**

This aspect of the mega region concept seems challenging.

In theory firms could locate in the SACOG region and be accessible to some Bay Area workers. But there are three large challenges:

- 1) Commuting flows to date have been relatively small and to and from Solano County mainly and not the full East Bay or region
- 2) The first leg of high speed rail, if successful, will bring Valley workers closer to Bay Area jobs than most Bay Area/SACOG region connections
- 3) Existing Capitol Corridor rail service is at least 2 hours each way from any substantial Bay Area population center and that does not seem a reasonable everyday commute time

For any mega region commuting connection, faster and more frequent non-auto commuting options seem a requirement.

In the far distant time period, it is possible that Valley communities will be connected to the SACOG region via high speed rail and that could provide some opportunities.

## **SACOG as a Home for Commuters to the Bay Area**

In theory this seems like a possibility as the region does have lower cost housing compared to the Bay Area by a wide margin.

In practice it is hard to see how this will work unless

- 1) New housing is built at an affordable level and near an easy commute option and
- 2) A much easier than currently available commute option exists.

As mentioned above, the successful connection of the Valley to San Jose and the Bay Area by 2025 would place the SACOG region at a competitive disadvantage for commuting given the current Capitol Corridor operations.

## Homegrown Industries—Clusters of Opportunity

The clusters of opportunity identified by staff are similar to the ones discussed in the last full forecast update for the SACOG region, which occurred in 2009. More detailed analysis on regional clusters is found in this report from Valley Vision, which includes Information and Communications Technology (ICT) in addition to the five clusters in the staff memo.

[http://valleyvision.org/sites/files/pdf/next\\_economy\\_cluster\\_key\\_findings.pdf](http://valleyvision.org/sites/files/pdf/next_economy_cluster_key_findings.pdf).

It is important to note that the cluster concept is discussed for three different objectives: 1) to identify opportunities for workers seeking jobs and training and 2) to support high value niche markets even if small and 3) to boost overall job growth. Training, particularly if employer designed, can boost job growth opportunities. On the other hand major opportunities for workers will be found in large sectors and with large replacement openings with baby boomer retirements pending.

Worker training is an activity within the control of organizations and policy within the region and a great activity, but that is different from being a driver of economic base (export) job growth.

In terms of agriculture and food manufacturing, job levels have declined, are expected to decline further and are relatively small compared to the job growth levels needed to meet the baseline, recommended and high job forecasts. There may well be niche markets that can be nurtured as agriculture shifts more to high value commodities but it is not clear to CCSCE why this sector was identified as a sector of opportunity if the goal was to substantially increase job growth in the region.

Staff's definition of the education and knowledge cluster consists of public and private education institutions, publishing and broadcasting and what is called education support services. Growth in the two major public universities and private K-12 and vocational schools is already assumed and the indications from staff are that planned growth at U.C. Davis and Sacramento State University are already within the projected levels. These two sectors had approximately 45,000 jobs in 2016 with limited recent growth. If the universities planned for major expansions, that could be a source of additional job growth.

Private K-12 and vocational schools serve mainly local residents and are not a likely source of export job growth beyond what is already in the baseline forecast.

Publishing and broadcasting are small sectors with limited growth expected in the state and nation.

“Advanced manufacturing” is a goal in all regions although it does not have an easy translation into specific industries where data is available. Like with agriculture related activities there may be small niche market opportunities to be nurtured.

The one large “advanced” manufacturing area that could be a source for job growth is associated with electric vehicles and associated technology and auto technology in general. The Bay Area has recently been the site of several startups in this area as well as major Tesla expansions. Perhaps the region can compete for these jobs or jobs connected to their supply chains.

The other opportunities for advanced manufacturing listed in existing regional cluster documentation--Aerospace, Chemical, Computers/electronics, Machinery, Plastics Products and Transportation Manufacturing—are all relatively small with declines expected in the future, with the exception of pharmaceuticals and as mentioned above activities associated with automobile technology.

Life sciences and health care is a large and growing sector primarily because the number of health care jobs is large and expected to increase substantially. But for the most part these are local serving jobs (doctors, hospitals, social assistance, nursing homes and the like) and not prime candidates for export job growth.

The one exception would be activities associated with a major state health care initiative. If the state becomes a more important player in health care planning and initiatives, providers and insurance companies could expand to be near state decision making. Otherwise large population serving job growth (and many opportunities for workers to replace retiring boomers) is already included in the forecasts.

Information and communications technology is somewhat aligned with CCSCE’s professional and information services category and is probably the prime opportunity for boosting economic base job growth by capturing a larger share of activities that might otherwise have located in the Bay Area. These opportunities and challenges are discussed above.

I do not find sufficient data or definition clarity to offer thoughts on the “clean energy” cluster as an opportunity for economic base job growth based on local policies and initiatives.

### **Other Sensitivity Factors**

Housing and growth sector issues have been covered above.

The other factors mentioned in the table on page 2 have one or both of these two conditions—1) they are not under control of SACOG policy and 2) are likely not

to make a substantial difference in regional competitiveness although they may be important for other reasons.

### **Working at Home**

One factor that is under local control and could help competitively (some) and in meeting air quality targets is a focus on developing places that are convenient for working from home.

This is a large consideration in the SCAG (Los Angeles region) RTP/SCS as that region faces challenging GHG emission reduction targets from ARB.

Companies play a role here, as do local regulations and policies.

Companies may begin to allow more working from home as technology improves and impediments to getting skilled workers increase. This would play into the region's lower cost of housing advantage.

I think this also means that housing near high activity centers/amenities will be favored by home based workers who can then do chores, eating and such without having to get in a car. So housing location matters for this as well as commute transit access and lifestyle choices.

One cautionary note is an article in the July 26<sup>th</sup> Wall Street Journal that more companies are now requiring workers to come into work more and work from home less.

### **Housing Types**

In terms of type of housing, for environmental and equity reasons the region needs both market rate and subsidized housing. In terms of impact on economic competitiveness in a mega region context, market rate housing with a lower cost structure is more important.

The type of housing should be determined by builders in touch with demographic trends. Three trends of note currently are 1) the growing number of older households who might want to downsize in a more convenient location within or near their existing community, 2) younger families who are increasingly preferring a car light location for housing and 3) the generally smaller household sizes anticipated in the future by lower birth rates and more older/smaller households.

### **Age and Ethnicity**

Age trends are important to understand for planning. But they are 1) not something over which SACOG has control and 2) that are likely to change so they are less important in a sensitivity analysis.

The demographic trends used in this project come from Department of Finance (DOF) projections. The level of population growth in the DOF projections is higher than is consistent with the baseline and low job growth scenarios but the major age trends are correct.

**SACOG Population by Age Group (Thousands)**

	2015	2025	2040	2050	2015-25	2025-40	2040-50
0-14	471.6	459.4	514.8	538.8	-12.2	55.4	24.0
15-24	375.1	390.2	404.1	429.1	15.1	13.9	25.1
25-54	937.8	1,011.3	1,217.5	1,308.3	73.5	206.1	90.8
55-64	300.8	305.8	350.5	384.2	5.0	44.7	33.7
65-74	199.6	274.1	298.3	341.6	74.4	24.2	43.3
75+	144.8	224.1	397.6	448.9	79.3	173.5	51.3
Total	2,429.7	2,664.9	3,182.7	3,450.9	235.2	517.8	268.2

Source: DOF

The first ten years are characterized by falling birth levels and a surge in population 65+ as baby boomers age. After 2030 boomers move into the 75+ age groups and there is, once again, some growth in the working age population.

Overall population growth in these projections is lower in terms of annual growth rates than recent history and the population growth associated with the baseline job growth projections is even lower.

The DOF projections by ethnic group are shown below. There are two cautions in interpreting this data. One, DOF reports that many residents who previously identified as Asian now identify as multi race. Second, the language, educational and other characteristics of the second and third generation Hispanic population is different from that of first generation immigrants and these second and third generation Hispanics are the largest and increasing share of the Hispanic population in the region.

These trends are not in the control of SACOG policy and are unlikely to change significantly.

**Table 9 SACOG Region Population by Ethnic Group (Thousands)**

	2015	2025	2040	2050	% Change 2015-2050
Total	2,429.7	2,664.9	3,182.7	3,450.9	42.0%
White, Non-Hispanic	1,316.5	1,455.5	1,560.3	1,631.1	23.9%
Black, Non-Hispanic	162.8	227.2	214.9	229.6	41.0%

Asian, Non-Hispanic	321.0	361.1	409.1	431.5	34.4%
Multiracial, Non-Hispanic	102.5	136.2	212.0	270.3	163.7%
Hispanic	526.9	606.0	786.4	888.4	68.6%
% white, Non-Hispanic	54.2%	54.6%	49.0%	47.3%	

### **Bottom Line Takeaways**

1. Increasing the supply of housing and at reasonably affordable prices/rents and in locations desired by potential residents is critical to achieving the baseline job growth forecast and even more critical for recommended job forecast. A housing cost advantage is of limited benefit if supply is lacking.
2. Expanded and faster Capitol Corridor or other non-auto commuting options are essential to take advantage of potential mega-region opportunities.
3. In terms of potential opportunities for faster job growth, CCSCE views professional and information services as the most promising target sectors followed by activities associated with expanded state planning and initiatives in areas like transportation, climate change and health care.