Overview of Regional Growth Forecasting
For Connect SoCal 2024

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www.scag.ca.gov

Presentation Outline

- Model Overview
- Region and County Demographic Projection Methods
- Region and County Economic Projection Methods
- Small Area Projection Methods
**Envisioning 2050**

- Births & Deaths
- Economic Base compared to other places
- Technical Process
- Expert Informed
- Basis for Subsequent Policy & Strategy Development
**SCAG’s Regional Economic-Demographic Forecast Process**

**Regional Economic-Demographic Forecast Process**

- Base year population
- Domestic (+) in-migration (-) out-migration
- (+) Net international migration
- (+) Natural Increase (births – deaths)
- Residential Population
- (+) Group quarters population
- Total population

**Total Employment Projection**
- Labor force demand
- Labor force supply
- Labor force participation rate

**Total Households**
- Household formation (headship) rate

**Timeline**

- **August 2021**
  - Demographic Panel of Experts

- **November 2021**
  - Regional projection ranges presented

- **May 2022**
  - Preliminary jurisdiction and TAZ-level projections released

- **February 2022**
  - Preliminary regional and county projections released

- **December 2022**
  - Local Data Exchange (LDX) concludes; projection refined if needed

- **Fall 2023**
  - Draft Connect SoCal released
• Experts in economics and demographics
• Pre-meeting survey
• Two 3-hour discussions in August 2021

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
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Preliminary Growth Projection:
“Slower Growth, Steady Improvement”

Seven Major Inputs
1. Employment Growth
2. Births
3. Deaths
4. Immigration
5. Domestic Migration
6. Labor Force Participation
7. Household Formation (Headship)
What Do We Know Today? Census 2020

GROWING, BUT MORE SLOWLY THAN WE THOUGHT

Sources: California Department of Finance (DOF), US Census Bureau, PRB

Assumptions driving regional growth
I.e., levers we have to explore scenarios:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mid/Baseline</th>
<th>Low</th>
<th>High</th>
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<tbody>
<tr>
<td>Births</td>
<td>1.5 births/woman</td>
<td>1.4 births/woman</td>
<td>1.6 births/woman</td>
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<tr>
<td>Deaths</td>
<td>Stable rates (2019)</td>
<td>Same</td>
<td>Rates decline through equity improvements</td>
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<tr>
<td>Net Migration</td>
<td>Net int'l is high, net out migration moderate</td>
<td>Net int'l is low, net out migration continues</td>
<td>Net int'l. Is high, net out is low</td>
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<tr>
<td>Labor Force</td>
<td>Slight increase from 2019</td>
<td>Same</td>
<td>Same</td>
</tr>
<tr>
<td>Household Formations</td>
<td>Most groups return to 2005-07 levels.</td>
<td>No improvement (2015-19 levels; historic low)</td>
<td>Most groups return to 2005-07 levels.</td>
</tr>
<tr>
<td>Economic Competitiveness</td>
<td>Region remains competitive and innovative, climate change has no net effect on growth</td>
<td>Climate change &amp; high relative cost of living are challenges</td>
<td>Region captures a larger share of U.S. jobs, climate resilience and easing cost of living encourage growth</td>
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</table>
Population growth far slower than projected in 2017

- Census 2020: lower starting point
  - Several years of lower fertility
- COVID – a few “flat” years
- Moderate growth from natural increase and immigration
- Baby boomers hit their 80s and 90s...
- Reflects regional, national, global trends

![Graph showing population projection ranges from 2010 to 2055]

Job Growth

- Expert panel insights: Cost of living balanced by:
  - Diverse industry mix
  - Ports / logistics
  - Natural amenities
  - Educational institutions
  - Culturally welcoming compared to other regions -> innovation
- Fairly unlikely SoCal’s share of national jobs will appreciably decrease

![Graph showing employment projection ranges from 2015 to 2055]
Households: Closer to prior projection

- Census 2020: similar starting point
  - "found" ~100,000 units
- 2017 ACS: Headship hits historic low but ticking up (2019, 20)
- 2021 housing unit growth strong
- Aggressive state policies

Aging population leads to smaller households

Source: SCAG Connect SoCal 2024 Preliminary Forecast Ranges.  Pyramid shows baseline (mid) series.  Headship from ACS 5-year estimates.
LESS GROWTH THAN BEFORE:

- Less than half the population growth...
- means only 71% of the job growth...
- but still about 90% of the household growth due to smaller households and pent-up demand.

SCAG Region Population, Households and Employment
Preliminary Connect SoCal 2020 vs. Connect SoCal 2024

Population Change & Aging

Components of SCAG Region Population Change

Source: CA DOF (historical) and SCAG (projection). Figures expressed represent total annual population change.
County Projections

Percent Change 2019-2050

- **Population**
- **Households**
- **Jobs**

<table>
<thead>
<tr>
<th>REGION</th>
<th>Imperial</th>
<th>Los Angeles</th>
<th>Orange</th>
<th>Riverside</th>
<th>San Bernardino</th>
<th>Ventura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>24%</td>
<td>3%</td>
<td>17%</td>
<td>42%</td>
<td>37%</td>
<td>14%</td>
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<tr>
<td>Households</td>
<td>16%</td>
<td>8%</td>
<td>11%</td>
<td>40%</td>
<td>25%</td>
<td>13%</td>
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<tr>
<td>Jobs</td>
<td>9%</td>
<td>13%</td>
<td>6%</td>
<td>-1%</td>
<td>-1%</td>
<td>-1%</td>
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Employment Projection Overview

- **U.S. Level Projection**
  - REMI projection

- **SCAG Region Projection**
  - Economic base vs. population-serving sectors
  - Population Growth

- **County Projection**
  - Industries
  - Local knowledge
Unique Features of SCAG’s Employment Projection Model

• Rely on SCAG’s unadjusted population projection

![Comparison of SCAG Region Population Projections 2018-2050](chart)

SCAG Model NAICS Code NAICS Codes Included Sector Title
10 - Total Jobs
11 11 Agriculture, forestry, fishing and hunting
21 21 Natural Resources
22 22 Utilities
23 23 Construction
31 31 - 33 Manufacturing
42 42 Wholesale trade
44 44 - 45 Retail trade
48 48 - 49 Transportation and warehousing
51 51 Information
52 52 Finance and insurance
53 53 Real estate and rental and leasing
54 541 Professional and technical services
55 55 Management of companies and enterprises
56 56 Administrative and waste services
61 61 Educational services
62 62 Health care and social assistance
71 71 Arts, entertainment, and recreation
72 72 Accommodation and food services
81 81 Other services, except public administration
92 92 Government
Self-Employed

• Aggregate to 20-sector model (two-digit NAICS)
Unique Features of SCAG’s Employment Projection Model

- Rely on SCAG’s unadjusted population projection
- Aggregate to 20-sector model (two-digit NAICS)
- Self-employment counted in relevant industry

![Graph showing EDD Wage & Salary Workers by Sector and ACS Total Self-Employed](image1)

21

Unique Features of SCAG’s Employment Projection Model

- Rely on SCAG population projection
- Aggregate to 20-sector model (two-digit NAICS)
- Self-employment counted in relevant sector
- Public administration employment counted in relevant sector

![Graph showing EDD Wage & Salary Workers by Sector](image2)

22
Forecast Method Depends on Sector

Change in share of growth

\[ EMP_{region}^{2014} = EMP_{region}^{2013} \cdot A(\text{SHARE}_{region}^{2014} - \text{SHARE}_{region}^{2013}) \]

\[ SHARE_{region}^{2014} = EMP_{region}^{2014} / EMP_{region}^{2013} \]

Constant share of regional employment in given year

\[ EMP_{region}^{2014} = EMP_{region}^{2013} \cdot \text{SHARE}_{region}^{2013} \]

\[ SHARE_{region}^{2014} = EMP_{region}^{2014} / EMP_{region}^{2013} \]

Constant share of growth delta

\[ EMP_{region}^{2014} = EMP_{region}^{2013} \cdot \text{SHARE}_{region}^{2014} - \text{SHARE}_{region}^{2013} \]

\[ SHARE_{region}^{2014} = EMP_{region}^{2014} / EMP_{region}^{2013} \]

Population growth

\[ EMP_{region}^{2014} = EMP_{region}^{2013} + \text{POP}_{region}^{2013} \cdot (\text{SHARE}_{region}^{2014} - \text{SHARE}_{region}^{2013}) \]

\[ SHARE_{region}^{2014} = EMP_{region}^{2014} / POP_{region}^{2013} \]

Average share over given base period

\[ EMP_{region}^{2014} = EMP_{region}^{2013} + (\text{EMP}_{region}^{2013} \cdot \text{SHARE}_{region}^{2013} - \text{SHARE}_{region}^{2013} \cdot \text{EMP}_{region}^{2013}) \]

2050 Projected Employment

![2050 Projected Employment Chart]

- 2019 Actual
- 2050 Projected

- Imperial: 30.5% (Δ = 7.8%)
- Los Angeles: 11.1%
- Orange: 41.9%
- Riverside: 24.7%
- San Bernardino: 0.4%
Projected Employment for Riverside and San Bernardino

Riverside

San Bernardino

Projected Employment for Los Angeles and Orange Counties

Los Angeles

Orange Actual
Projected Employment for Imperial and Ventura

Imperial

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employment</th>
<th>Growth</th>
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<tbody>
<tr>
<td>Accommodation and Food Service</td>
<td>101.3%</td>
<td>19.8%</td>
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<tr>
<td>Information</td>
<td>84.5%</td>
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<tr>
<td>Health Care and Social Assistance</td>
<td>70.3%</td>
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</table>

Ventura

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employment</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resources and Mining</td>
<td>14.0%</td>
<td></td>
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<tr>
<td>Management of Companies and Complexes</td>
<td>44.2%</td>
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<tr>
<td>Accommodation and Food Service</td>
<td>29.9%</td>
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</tbody>
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SCAG Region Employment
Preliminary RPT24 vs. RTP20

Δ = 19.8%
Δ = 13.2%
Projection -> Regional Plan

"set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state board, and (viii) allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506)." California Government Code 65080(b)(viii)
Preliminary small area household forecast methodology

1. Estimate remaining general plan capacity and control to county/regional projection
2. Add RHNA/housing element rezone sites if needed
3. Growth prioritization steps
   - Increase in Priority Development Areas (PDAs)
   - Minimize in Green Region Resource Areas (GRRAs)

Preliminary small area employment forecast methodology

- Estimate the base year employment
  - Apply EDD and Infogroup data for jurisdictional and TAZ level estimates
  - Control to the county level estimates
- Allocate county level growth to jurisdictions
  - Calculate the past share of city growth to the county
  - Apply the above share to the county level growth projections
- Disaggregate jurisdictional level growth to TAZ
  - Calculate the past share of TAZ level growth to the city
  - Apply the above share to the city level growth projections

New data and county/regional totals, but same approach as Connect SoCal 2020.
Resources


County & Regional Forecast: https://scag.iqm2.com/Citizens/FileOpen.aspx?Type=14&ID=2286&Inline=True&page=51

2024 Local Data Exchange: https://scag.ca.gov/local-data-exchange

Preliminary Allocation Methodology: https://scag.ca.gov/sites/main/files/file-attachments/twg051922fullagn.pdf#page=6

Regional Data Platform: https://hub.scag.ca.gov

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