California demographic checkup: key indicators and context

Ethan Sharygin
Demographic Research Unit
California Department of Finance

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“Slowest growth ever”

The Golden State’s population growth rate is the slowest in recorded history. Why?

California’s population growth is the slowest in recorded history

California Inches Toward 40M People, but Growth Rate Slows

Where are the babies? California sees slowest population growth since it started counting
“Slowest growth ever”

$$\epsilon = -0.18 \text{ (10% increase in N = 2% decrease in \(r\))}$$

- States, by size
- Fitted line

Inter-Censal Post-Censal Projections
“Slowest growth ever”

Inter-Censal  2010 Census

Ann. Avg. 1975-2000: 1.82%
Doubling time: 38.4 years

r=1.8%

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Resident Population (1000s)


Annual Growth Rate (%)


“Slowest growth ever”

**Graph 1:**
- **Y-axis:** Resident Population (1000s)
- **X-axis:** Years (1860-2060)
- **Legend:**
  - Inter-Censal
  - 2010 Census
  - Post-Censal
  - Projections
- **Key:**
  - Arrow indicating a growth rate of \( \approx 1.8\% \)
  - Arrow indicating a growth rate of \( \approx 1 \rightarrow 0.4\% \)

**Graph 2:**
- **Y-axis:** Net growth, N persons (1000s)
- **X-axis:** Years (1860-2060)
- **Legend:**
  - Inter-Censal
  - Post-Censal
  - Projections
Determinants of the population growth rate

Decomposition of the Crude Growth Rate (CGR) Das Gupta 1993

\[ CGR = \frac{(N_2 - N_1)}{PY} \]  

(1)
Determinants of the population growth rate

Decomposition of the Crude Growth Rate (CGR) Das Gupta 1993

\[ CGR = \frac{(N_2 - N_1)}{PY} \]  
\[ CGR = \frac{(B - D + NM)}{PY} \]  
\[ CGR = \frac{B}{PY} - \frac{D}{PY} + \frac{NM}{PY} + \frac{NDM}{PY} \]
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Decomposition of the Crude Growth Rate (CGR) Das Gupta 1993

\[ CGR = \frac{(N_2 - N_1)}{PY} \]  
\[ CGR = \frac{(B - D + NM)}{PY} \]  
\[ CGR = B \frac{P_Y}{PY} + \frac{D}{PY} + \frac{NIM}{PY} + \frac{NDM}{PY} \]  
\[ CGR = B \frac{PY_{W15-49}}{PY_{W}} + \frac{PY_{W15-49}}{PY_{W}} + \frac{PY_{W}}{PY} - D \frac{P_Y}{PY} + \frac{NIM}{PY} + \frac{NDM}{PY} \]
Determinants of the population growth rate

Decomposition of the Crude Growth Rate (CGR) Das Gupta 1993

Decomposition between year == 2000 (1.03) and year == 2017 (0.54)

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<thead>
<tr>
<th>Component</th>
<th>Absolute Difference</th>
<th>Proportion (%)</th>
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<tbody>
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<td>Birth rate</td>
<td>-0.195</td>
<td>40.0</td>
</tr>
<tr>
<td>Death rate</td>
<td>-0.011</td>
<td>0.2</td>
</tr>
<tr>
<td>Net foreign migration</td>
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<td>-0.158</td>
<td>32.7</td>
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<tr>
<td>[Age structure effect]</td>
<td>-0.035</td>
<td>7.2</td>
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1. Net migrants are important to California’s growth

- **Foreign born**
  - Prime working ages
  - Children of foreign-born

- **Native born**

- **Total**

2. Net domestic migration tracks housing affordability

- **US/CA home price**
- **Domestic migration**
3. Fertility is shifting to older ages + correlated with income

Summary

1. Declining growth rate (to 0.5% in 2017-18).
2. Declining birth rate (to 11.8 per 1000 during 2017).
3. Net migration is important (Directly accounts for 25 percent of population growth since 2010; contributes further through fertility).
4. Domestic migration since 1990 has tracked housing affordability.
5. Economy, demography, and public policy all affect foreign migration.

Prognosis:
- Annual growth <1%, with possibility of negative years (average annual net addition of 150,000-250,000 persons per year).
- Effect of low growth rate on California welfare is ambiguous.
- Reasons for optimism on birth rates.