

Demographic Research Unit

State and County Population Estimates & Components of Change from 1970 to 2016



Panel Overview

- Population Estimates Methods.
- Description of Population estimates and growth rates from 1947 to 2016.
- Components of change (Births, Deaths, and Net Migration) from 1970 to 2016.
- Contribution of births and immigration to the population growth in California.
- Discussion about future population growth in California.



Population Balancing Equation

- Last Year's (revised) Population
- + Births
- + Domestic In-Migrants
- + International Immigrants
(authorized and unauthorized)
- - Deaths
- - Domestic Out-Migrants
- - Emigrants
- = Current Population
- [California July 2016 Population Estimates](#)



State & County Population Estimation Methods

- | | |
|---|--|
| <ul style="list-style-type: none">• State<ul style="list-style-type: none">• Driver License Address Change (DLAC) Model | <ul style="list-style-type: none">• Counties<ul style="list-style-type: none">• Modified DLAC Model• Ratio-Correlation Model• Tax Return Model |
|---|--|



Driver License Address Change (DLAC) Model

- Cohort-Component Method
 - Cohorts
 - 0-17
 - 18-64
 - 65+
 - Components
 - Births
 - Deaths
 - Net Migration



County Estimates: Modified DLAC Model

- This model is very similar to the DLAC model just described for the state population estimate.
- The county model adds a measure of county-to-county migration within California.



Data for 65+ Components

- Census 2010 baseline population
- No births to add to this cohort
- Actual or estimated deaths
- Medicare and Medi-Cal Program Enrollments
- International Immigrants (new from 2015)



Data for 0-17 Components

- Census 2010 baseline population
- Actual or estimated births
- Actual or estimated deaths
- Public school enrollment in grades 1-8 and elementary ungraded
- International immigrants (new from 2015)



Data for 18-64 Components

- Census 2000 baseline population
- No births to add to this cohort
- Actual or estimated deaths
- Driver license address change data
- Internal Revenue Service matched tax returns
- Immigration (legal, unauthorized, emigration)
- Group quarters population data

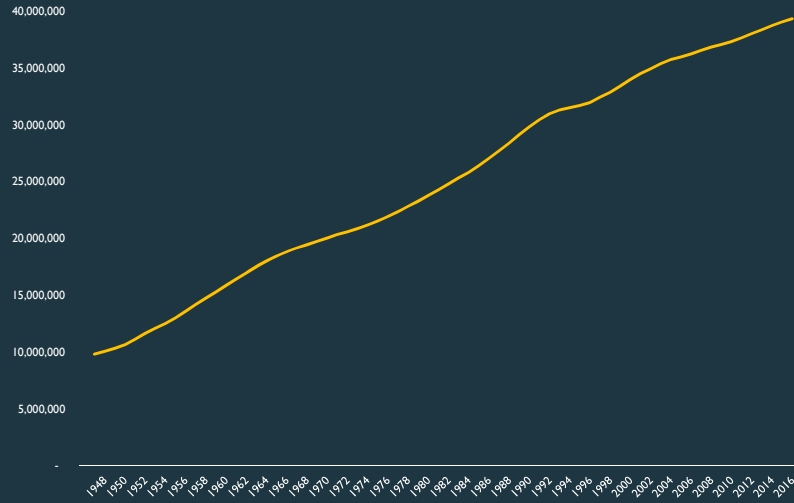


California Populations

- DOF has population estimates data from 1947 to current.
- Prior to 1970:
 - total population estimates at county's level.
 - No components of change published in E-6 report.



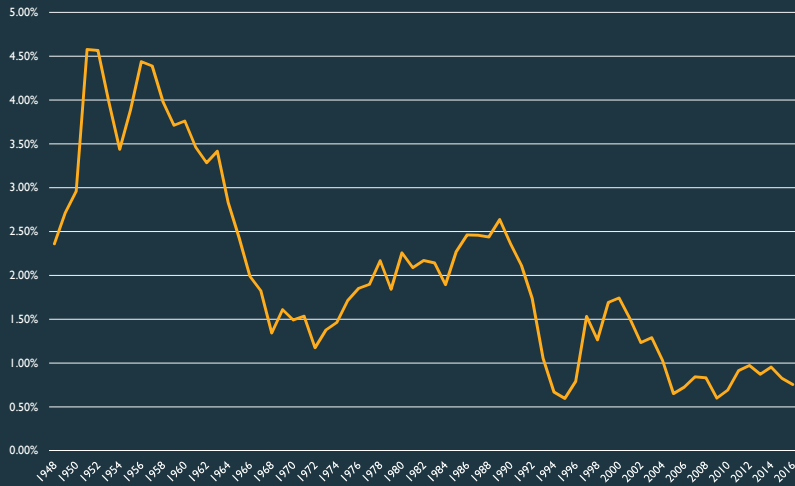
California Population 1947 - 2016



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California Population Growth Rates 1947 - 2016



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California Populations

- In 1947, California had 9.8 millions people.
- Current population is slightly over 4 times of the 1947 figures.
- Rapid population growth took off in the early 1950s.
- Rate of the growth were in a range from 2% to 4.6% each year.
- Slowdown period started from 1966 to the lowest at 1.2% in 1972.



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California Populations (continued)

- Growth rates gained momentum again in the 1980s at over 2% each year.
- In 1990s, population growth has declined significantly.
 - The lowest growth rate was .6% in 1995.
- Population growth bounced back to over 1% in the early 2000s.
 - 2005-2016: the growth rates were at 1% or less.
 - This trend tends to continue in the future.



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Why do we focus on the estimates data from 1970?

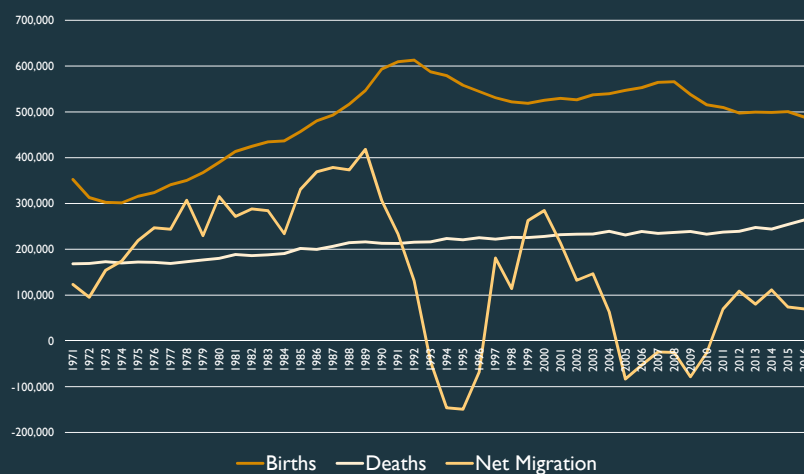
- California population estimated at 20,039,000 people in July 1970.
- Current state population estimates are at 39,354,000 people in July 2016.
- California population are projected to reach 40,033,000 people in July 2018.
- It takes 48 years for California to double its size in terms of population growth.



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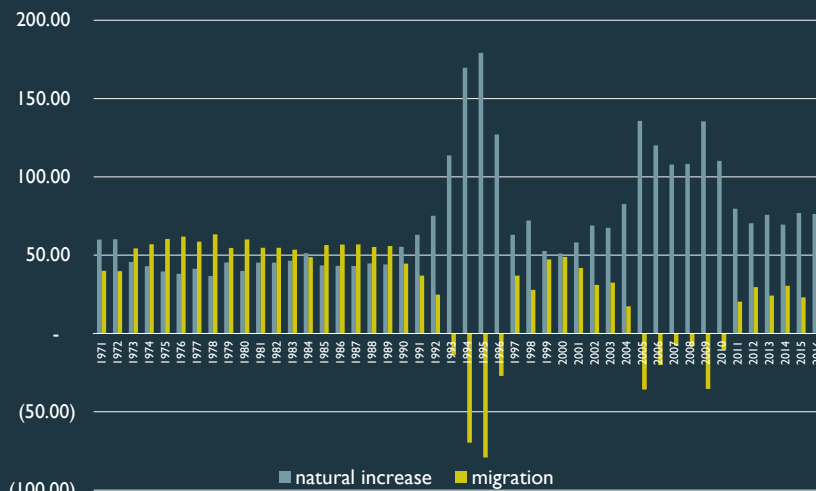
Component of Changes: Births, Deaths & Migration -1970-2016



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Shares of Natural Increase & Net Migration in Pop Growth 1970-2016



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Components of Change in California from 1970 to 2016

Year	Average Growth	Total Population Gained	Births	Deaths	Net Migration
1970s	1.67	3,217,987	2,967,984	1,542,842	1,792,845
1980s	2.28	5,884,193	4,592,809	1,971,926	3,263,310
1990s	1.38	4,277,398	5,656,784	2,200,370	820,984
2000s	1.04	3,658,626	5,426,857	2,345,544	577,313
2010-16	0.86	2,277,228	3,509,956	1,720,047	487,319
Total	1.45	19,315,432	22,154,390	9,780,729	6,941,771



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Components of Change in California from 1970 to 2016

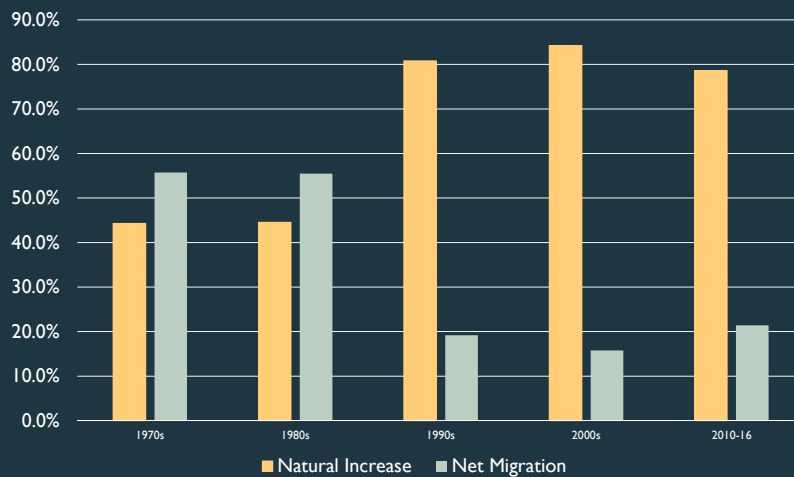
Year	Natural Increase	Net Migration	Net Immigration	Net Domestic Migration
1970s	1,425,142	1,792,845	1,110,995	681,850
1980s	2,620,883	3,263,310	2,149,979	1,113,331
1990s	3,456,414	820,984	2,137,786	(1,316,802)
2000s	3,081,313	577,313	1,812,322	(1,235,009)
2010-16	1,789,909	487,319	1,030,611	-543,292
Total	12,373,661	6,941,771	8,241,693	(1,299,922)



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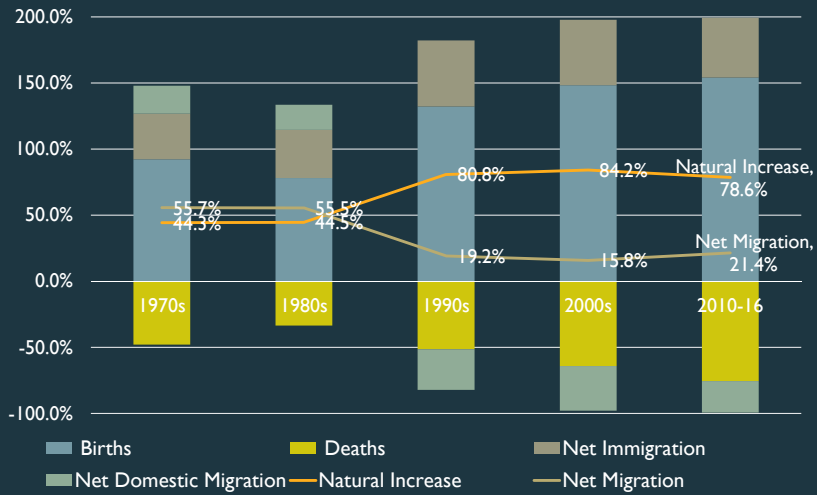
Shares of Natural Increase and Net Migration in Population Growth



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Shares of Natural Increase and Net Migration in Population Growth



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Factors contributing to population growth in California

- Birth is the most important factor in population growth at all times.
- Immigration is also a contributing factor.
- In 1970s and 1980s, net migration was outpaced natural increase due to increase in both immigration and domestic in-migration to the state.



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Factors contributing to population growth in California (continued)

- From the 1990s, state had high flow of domestic out-migration.
- Source of population growth has been heavily based on natural increase (79%).
- Immigration has slowed down, but kept net migration in positive.



What Will Be the Future of California Population Growth?

- Low births;
- High deaths (increasing size of baby boomer generation);
- Change in immigration policy toward H1b visa, refugees, & undocumented immigrants.

