

Recent Trends and Projection Impacts

33rd Annual Demographic Workshop

September 14, 2022



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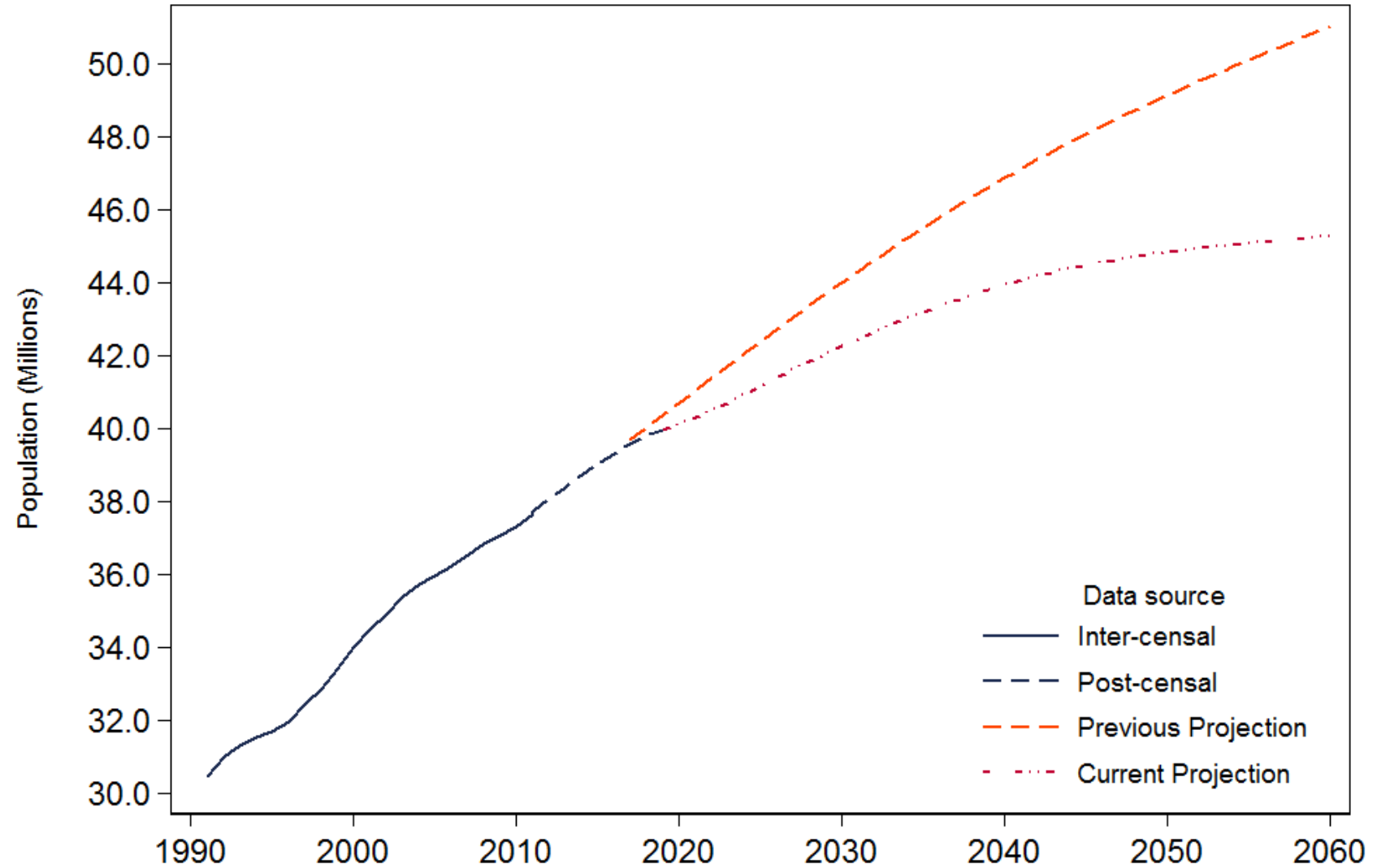
Current Population Projections for California

Figure 1 Total Population: Previous Vs. Current

Population growth is projected to slow to an average 0.5% per year (down from previous projections of 0.8% per year). At this rate, California will grow from 39.9 million in 2019 to 45.3 million in 2060 (instead of previous projections of 50.6 in 2060).

The projection reflects both:

- Lower starting population due to less estimated growth since 2010
- Net migration of ~ 100,000 per year rather than 200,000
- Fewer births, compounded by fewer foreign-born migrants
- Higher deaths from slowing life expectancy gains.



How much of this will be or is still true?

Assumptions and Methods

These are the basic modeling assumptions we make for each component:

- We model birth, death and migration rates for each county and work up to the state level.
- For births and deaths, we assume that each sex and age group's birth or death rate will follow a log-linear trend.

Overall, we assume:

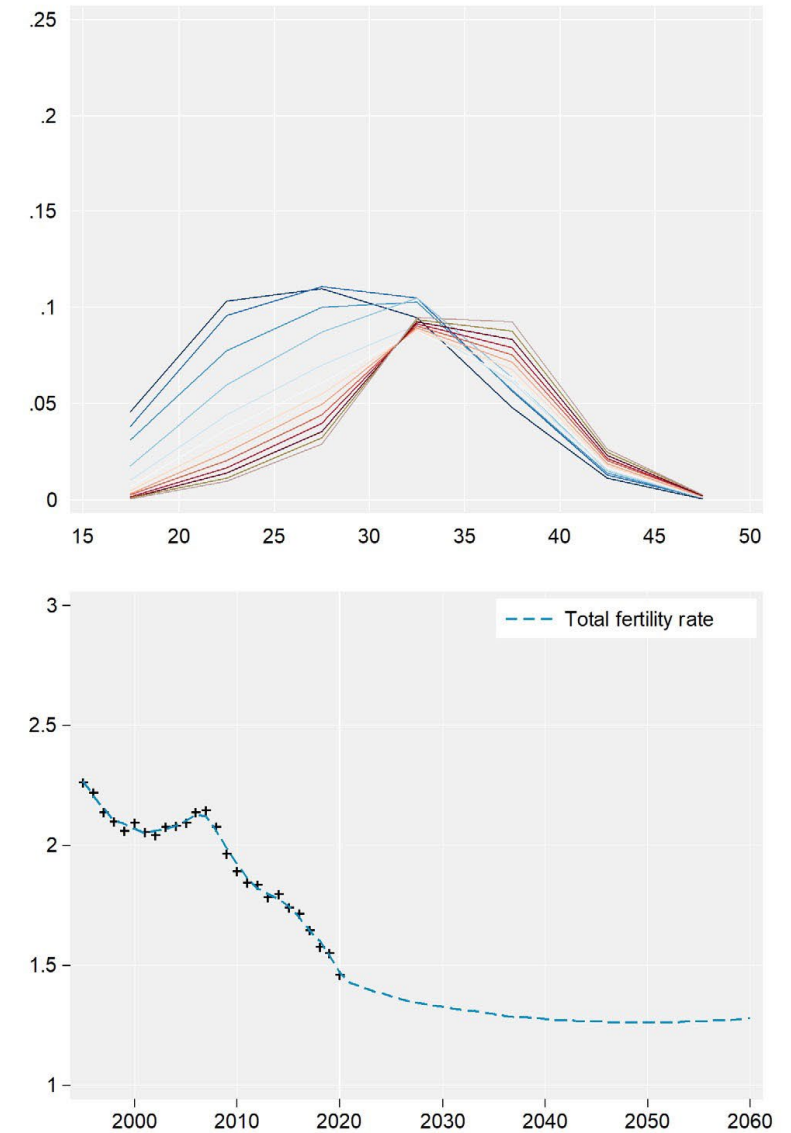
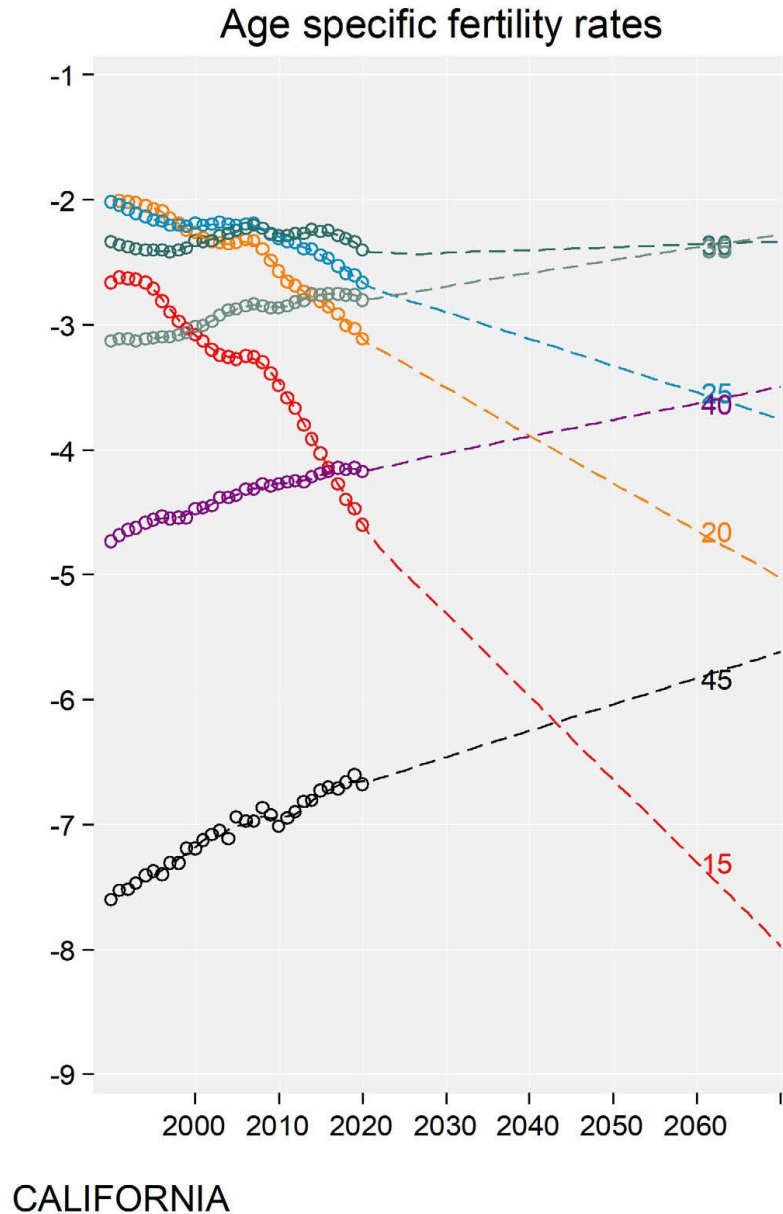
- That federal immigration and health insurance coverage policies do not drastically change. We also assume the availability of sufficient resources to support growth, including housing, water, energy, under approximately the same conditions as observed since 2010.
- Data Sources:
 - Births and Deaths: California Department of Public Health
 - Migration: A compilation of several state and federal agencies including ACS, US Census, CA Department of Education, CA Department of Motor Vehicles.

Figure 2 Total Fertility Rate

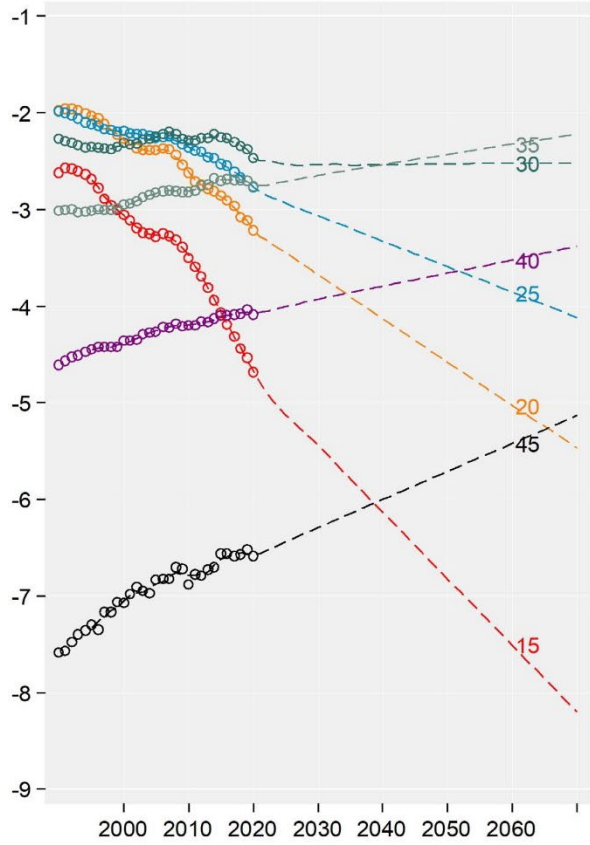
Analysis of the data suggest that birth rates are declining for women under age 30 and rising for those above 30, especially at ages 35-40 (these exceed 20-24 and 30-34 by the end of the forcast window).

Our new series project a similar rate of change compared to the previous series, but from a lower starting point in 2021. Fertility declines flatten by 2040.

This level of fertility would put California in the company of European countries like Spain and Italy which have had low TFR since the 1970's.

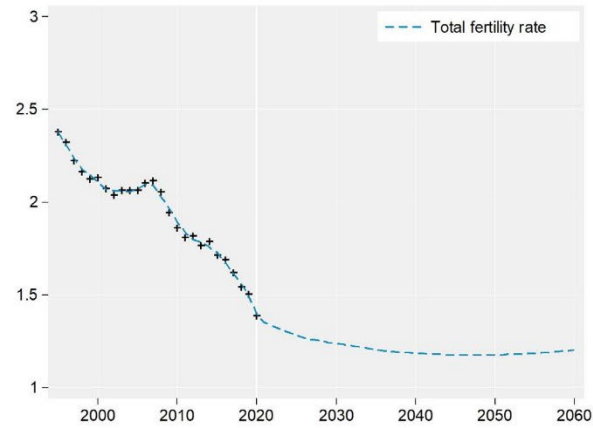
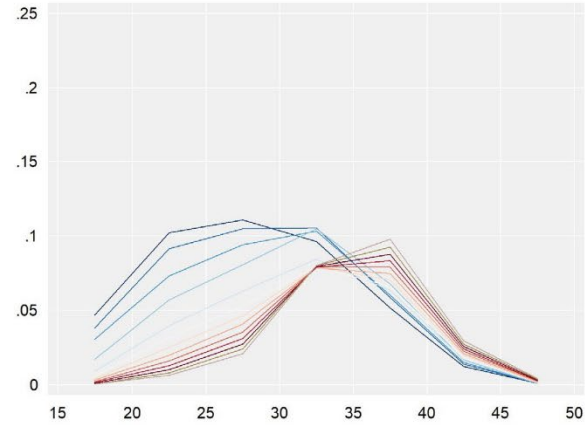


Age specific fertility rates



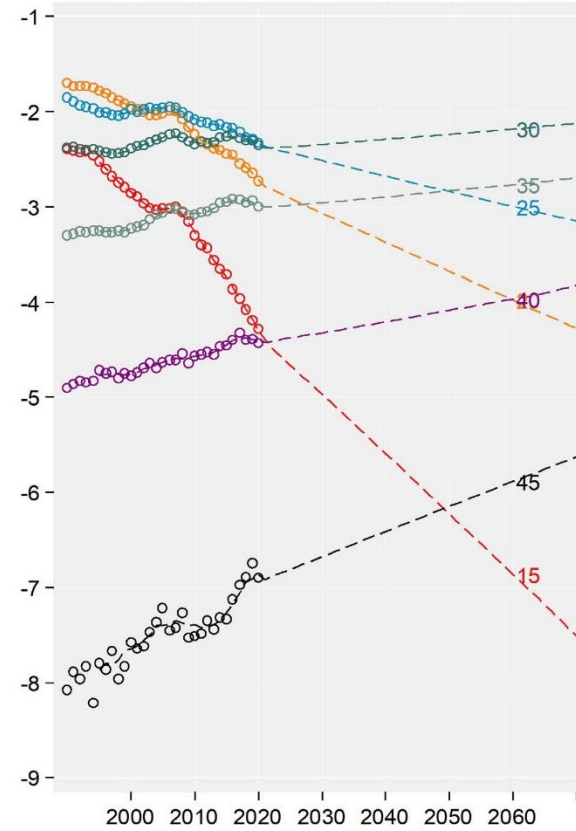
SOUTH COAST

Regional Fertility Rates: Ventura, Los Angeles and Orange



Regional Fertility Rates: Riverside and San Bernardino

Age specific fertility rates



INLAND EMPIRE

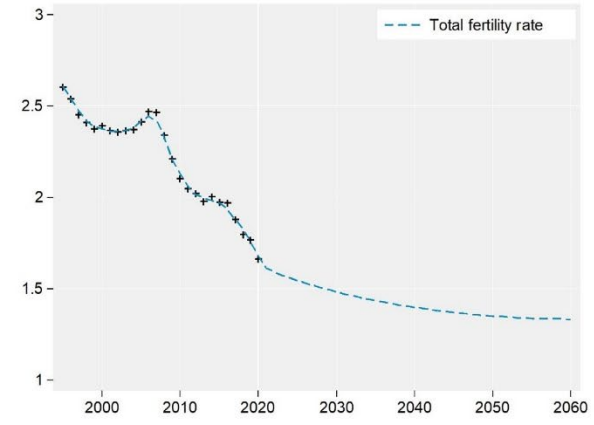
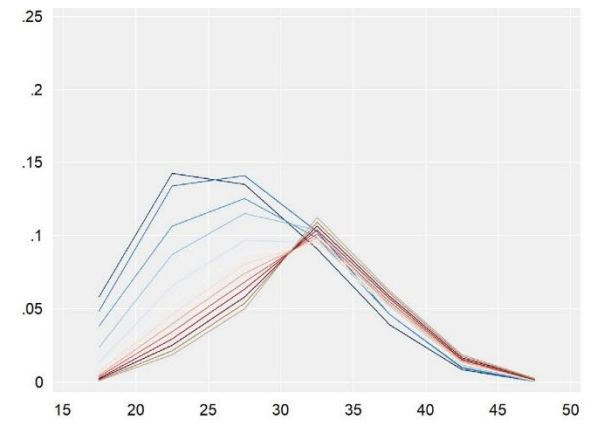
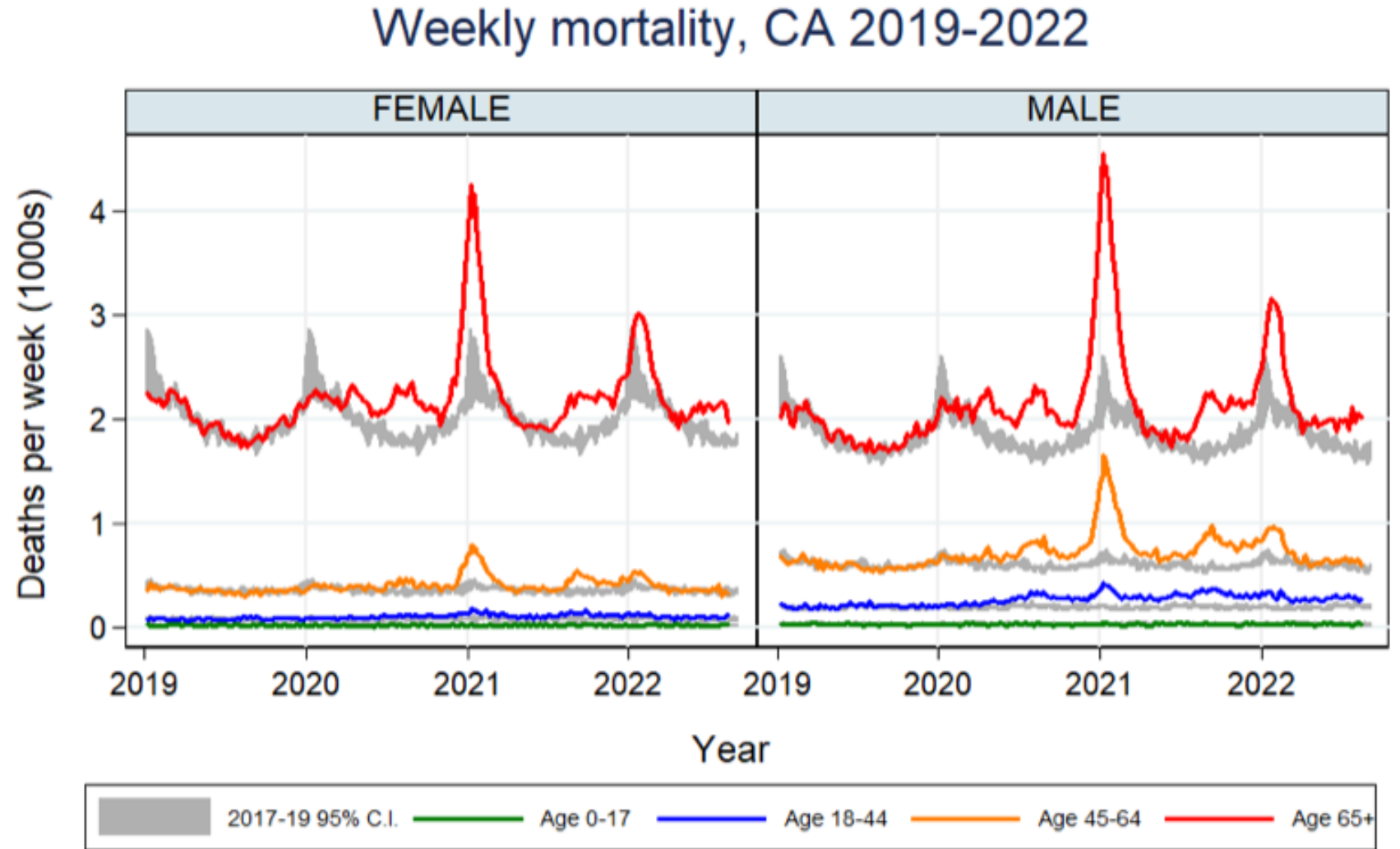


Figure 4 Recent Death Trends

Deaths continue to outpace the 2017-2019 average for 65+ and for Males 18 to 44. Also of note is the rise of BA.4 and BA.5 subvariants since late June, which are largely responsible for weekly deaths once again exceeding the top of the average band.



Years 2019-2022 (through week 32 of 2022). Not age standardized. Reporting may be incomplete.

Figure 5 Likelihood of Death

While the effects of the pandemic are clearly visible, overall trends in declining mortality continue to hold, even in a world with COVID-19 as an endemic flulike illness.

While neo-natal and 1-14 year old deaths from COVID were small even slight increases here generate significantly higher likelihoods.

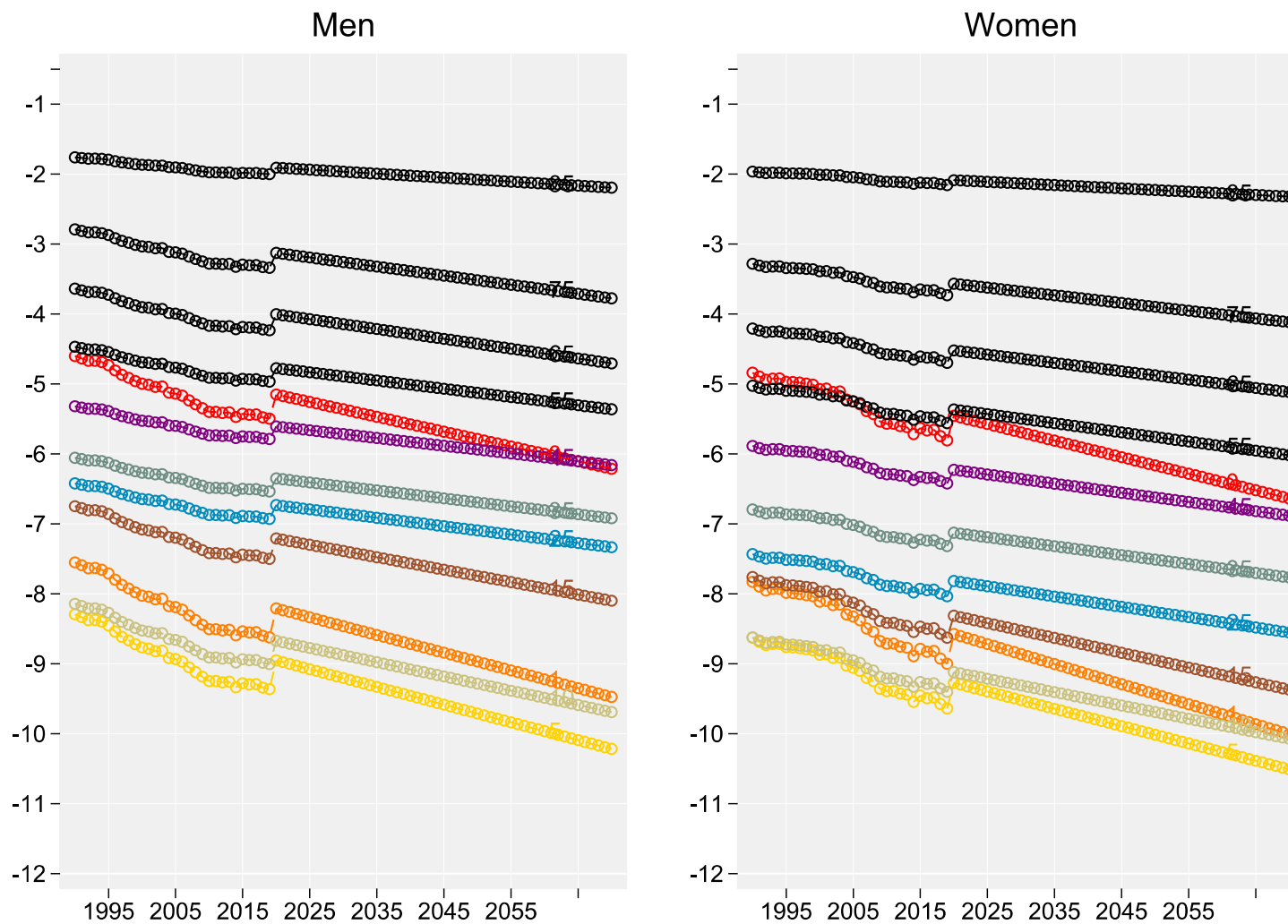


Figure 6 Life Expectancy At Birth

The new series projects lower life expectancy gains in the future. That translates to more deaths, which slow population growth. In the short run this is driven by COVID-19 as an endemic and continued deaths of despair (elevated suicide rates and fentanyl overdoses).

Life expectancy has not grown as fast as expected and the new projection series reflects that. However, California outpaces the U.S. as a whole, where life expectancy has not significantly changed since 2010.

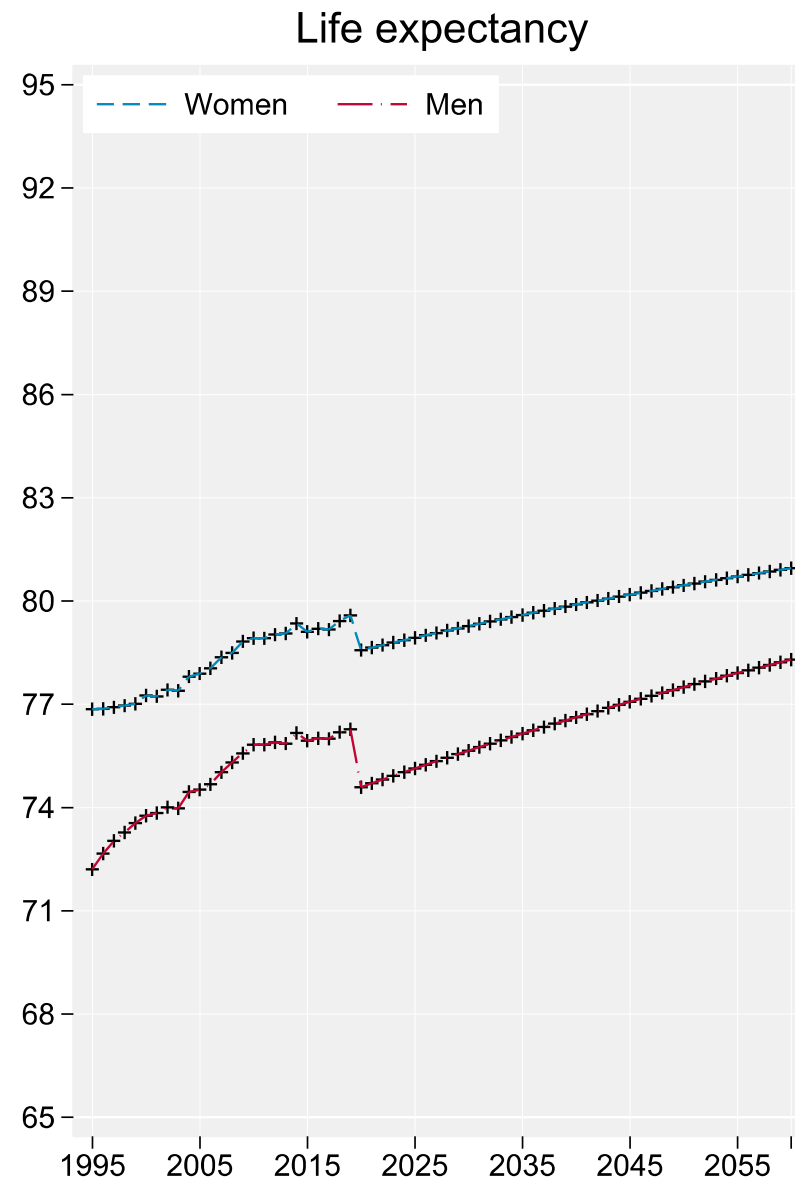
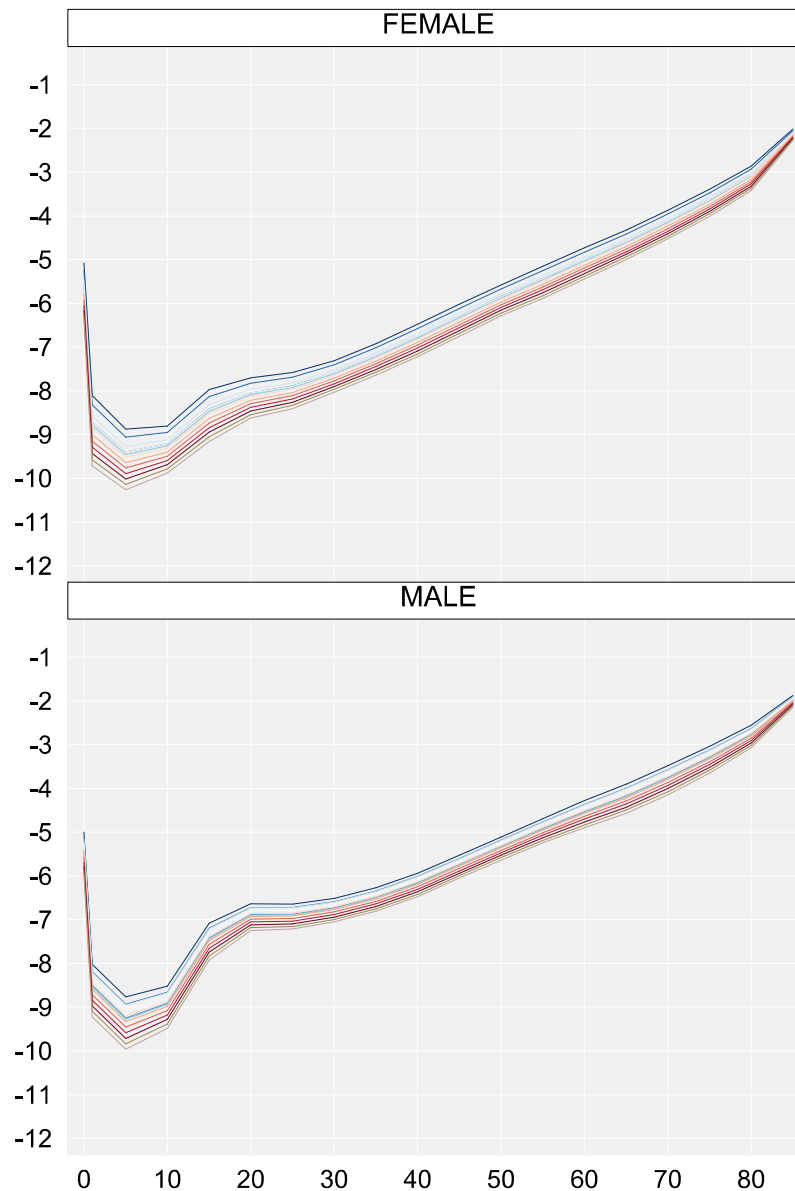
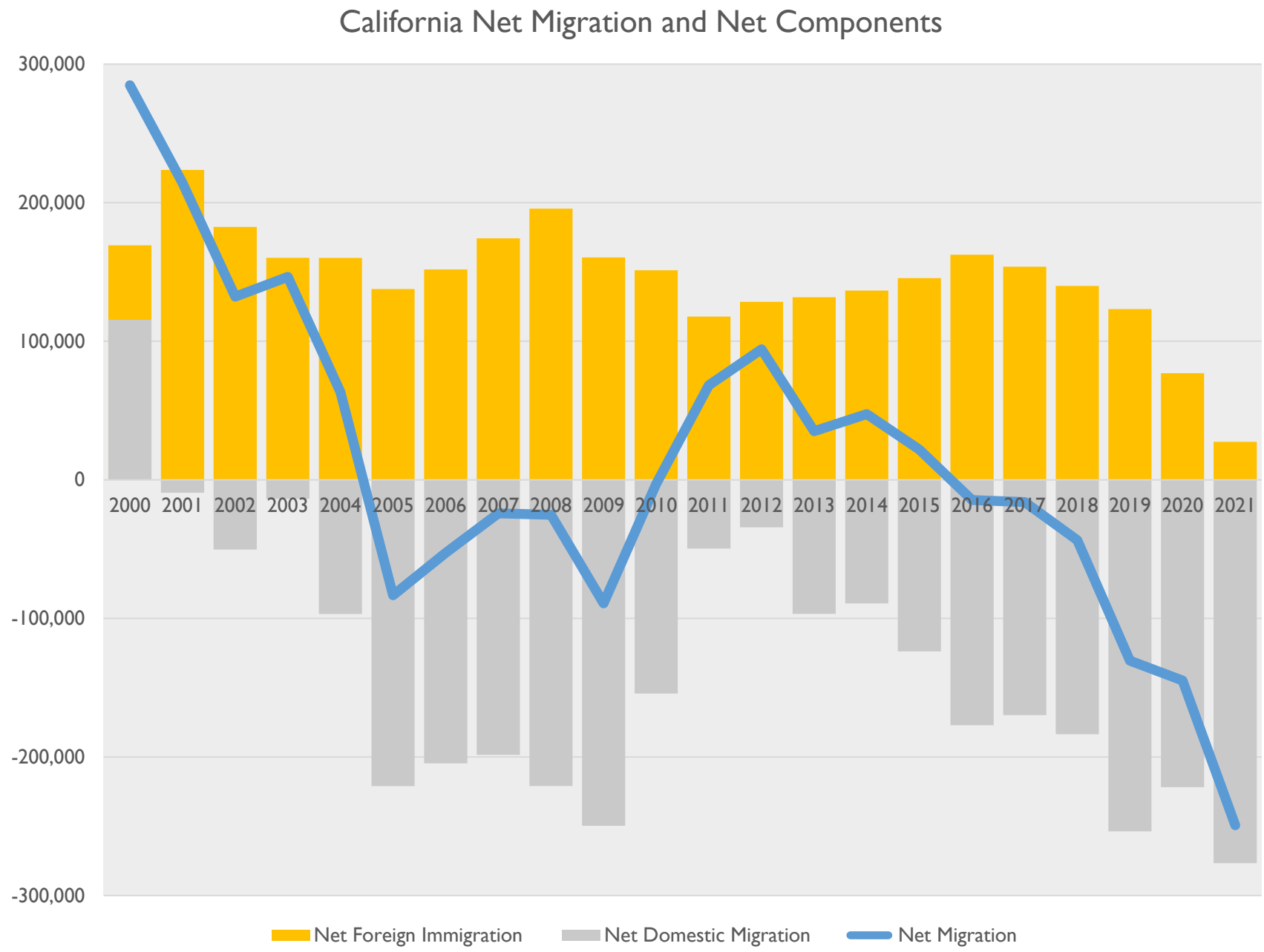


Figure 7
Net Migration

Net domestic migration has been negative for over 20-years in California, while this may change in the future, the affordability crisis does not help.

Net international migration has been an offsetting factor, however one with a troubling recent trend.

In the past where we had 175,000 migrants per year, projecting 100,000 per year may be optimistic at least in the near term. Likewise the age distribution of those international migrants matter and immigration of older cohorts helps neither fertility of future labro force needs.



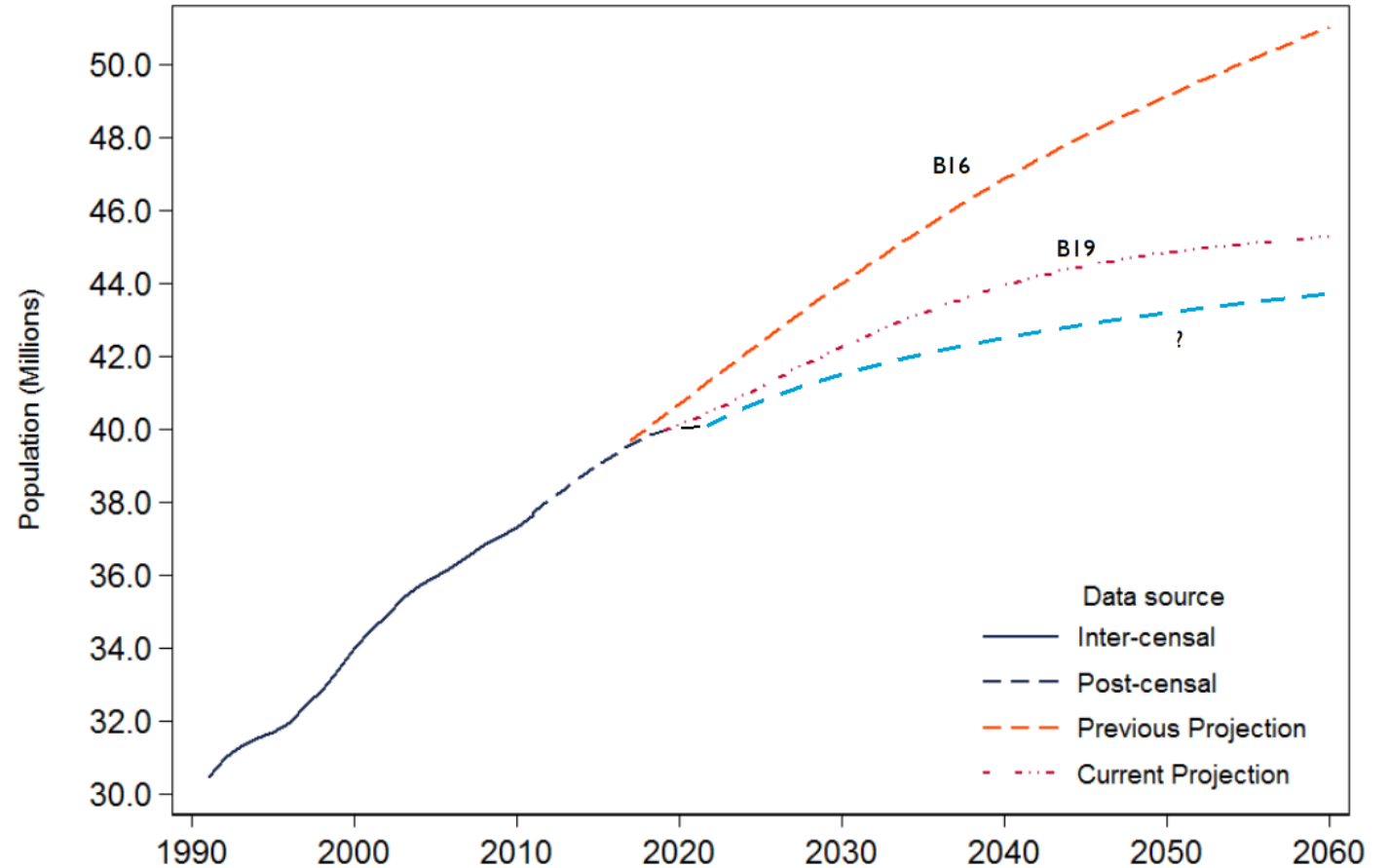
Future Population Trajectory

Figure 8: Back to Figure 1

Total Population: Previous Vs. Current Vs. ?

The blue line is not a certainty, not even a full projection. It represents the fertility and mortality components I have described and a very pessimistic outlook on migration. The next panelist should give us some brighter news and hope.

But, it is always important to note that demographic momentum exists, and it can be exceedingly difficult to overcome its force. (see Japan, S. Korea or states like Maine, or W. Virginia)



Thank You

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