

**University of New Mexico  
Geospatial and Population Studies**



# NM Population Estimates and Projections

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# Outline

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## Population Estimates

Background  
2019 Estimates  
Statewide Trends



## Population Projections

Background  
2020 Projections

# Population Estimates

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*Observations* about current or past populations



Inexpensive updates to costly census counts



Methods are well-established with known biases



Produced by the US Census Bureau, state and local agencies and private sector

	<b>US Census Bureau</b>	<b>UNM GPS</b>
Data Sources	Limited to nationally consistent data	State specific
Methods	1	3+
Smallest Geography	City/Town N=138	Census Tract N=499
Race Categories	6	4

## Estimate Source Comparison



## Cohort-Component

$$Pop_{2017} = Pop_{2010} + Births - Deaths + In Migration - Out Migration$$



## Housing Unit



## Ratio Correlation



## Cohort Change Ratios

# GPS Estimates Methodologies



**NM DOH VITAL  
RECORDS**



**NM MVD DRIVER'S  
LICENSES**



**NM PED SCHOOL  
ENROLLMENT**



**NM SOS VOTER  
REGISTRATIONS**



**CMS MEDICARE  
ENROLLMENT**



**IRS MIGRATION  
FILES**



**RESIDENTIAL  
BUILDING PERMITS**

# Population Estimates Key Input Data

# GPS Estimates Methodology

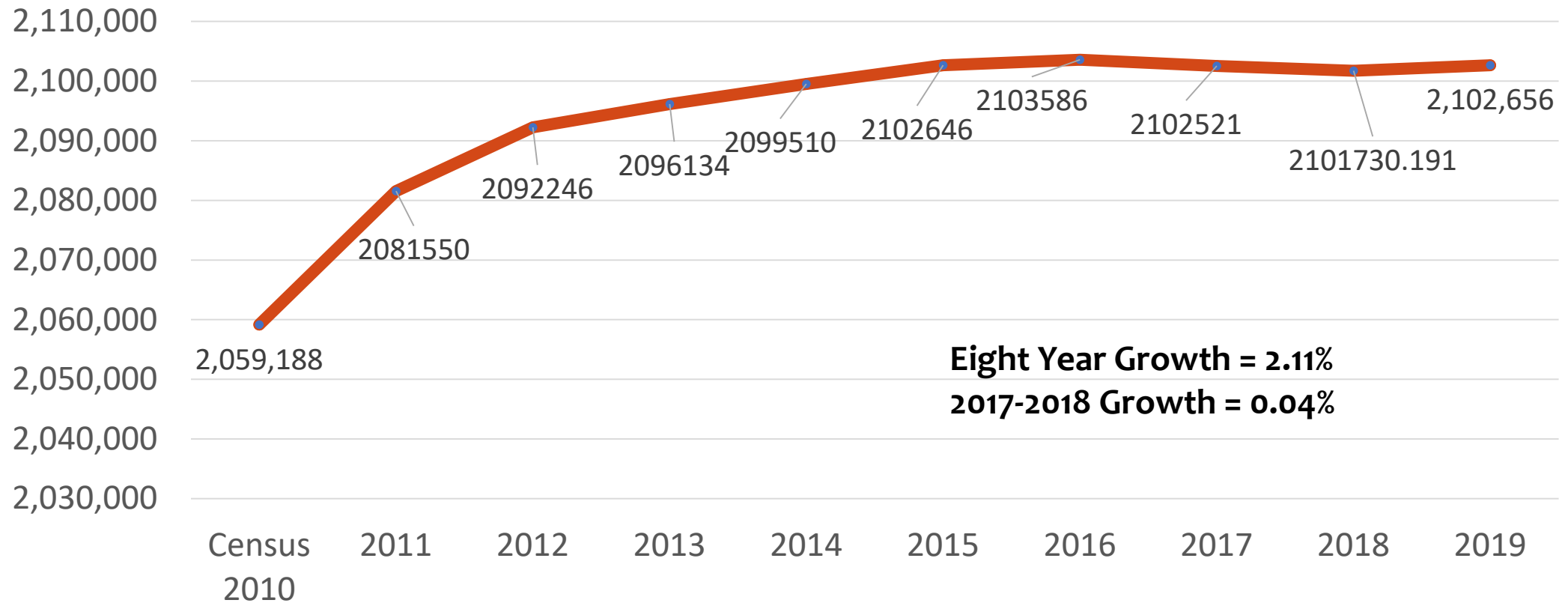
## Key Steps

1. State Total
2. County Totals
3. Census Tract Totals
4. Characteristics  
Age/Sex/Race/Ethnicity
5. Data Fitting

# Factors Influencing Uncertainty and Error in Estimates

- Smaller populations
- Further from the Last Census
- Underrepresented Populations
- On Tribal Lands
- As Populations Change

# New Mexico Population Estimates 2010-2019





Births are Down



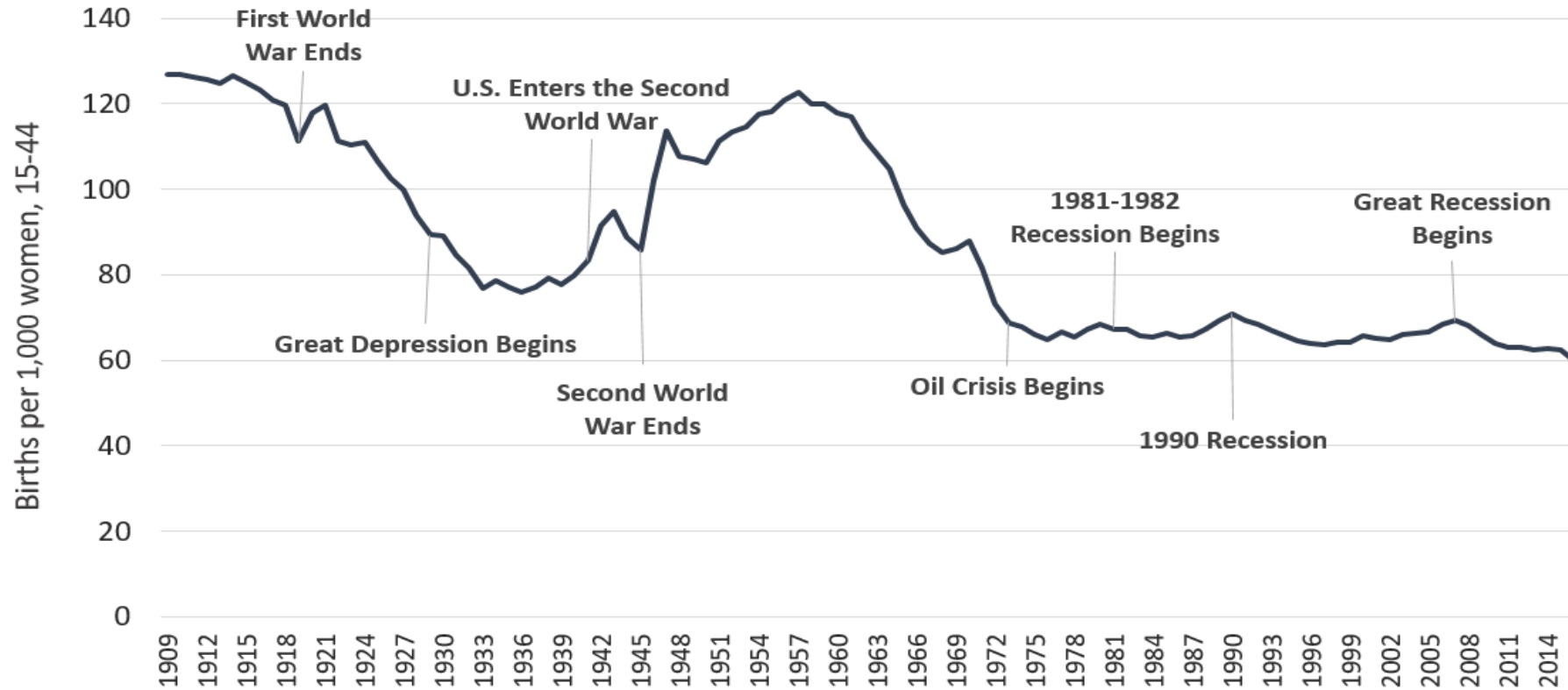
Deaths are Up



Migration is Out

# Why Flat Growth?

## Fertility Rate: United States, 1909-2016

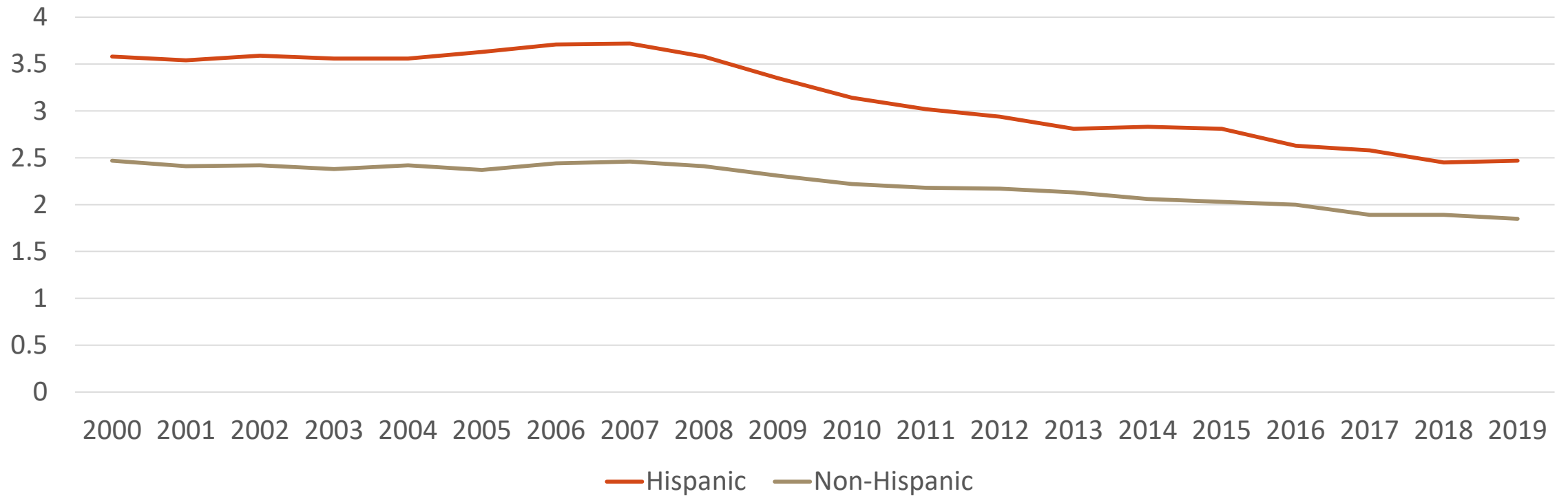


Note: Fertility rate is number of births per 1,000 women 15-44 years of age. Data prior to 1960 have been adjusted by the U.S. Census Bureau for under-registration. Data for census years (starting with 1940) are based on population enumeration as of April 1 whereas enumeration for all other years is as of July 1. Data for 1951-1954 and 1956-1971 are based off a 50% sample of births. Data 1972-1984, some states reporting are based off a 50% sample of births.

Source: NCHS, national vital statistics report, *vol 66, no 1* (for data 1960-2015). NCHS, *Vital Statistics of the United States, 2003, Volume I, Natality* (for data 1909-1960).

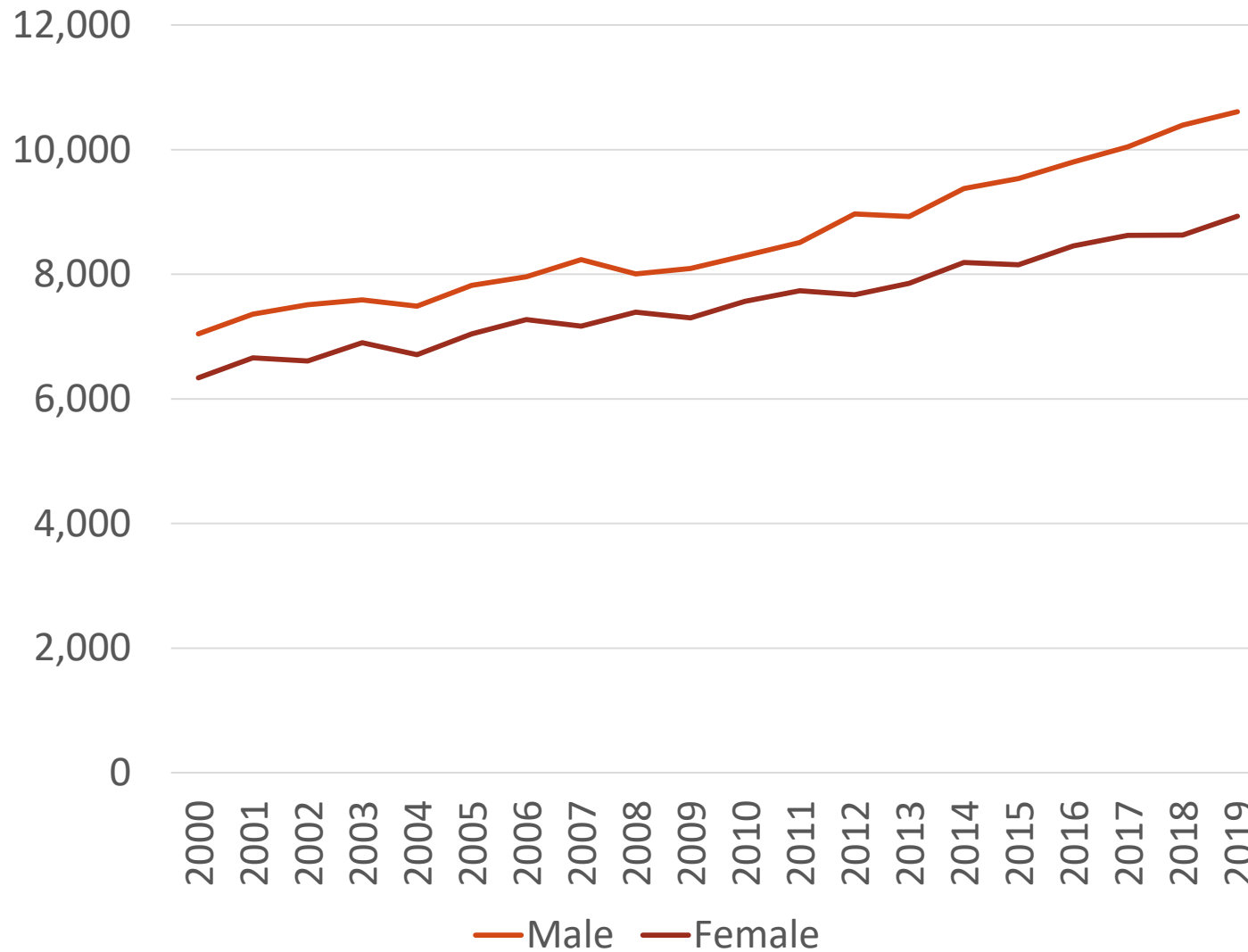


Total Fertility Rate Among Hispanic and Non-Hispanic Women in New Mexico, 2000-2018



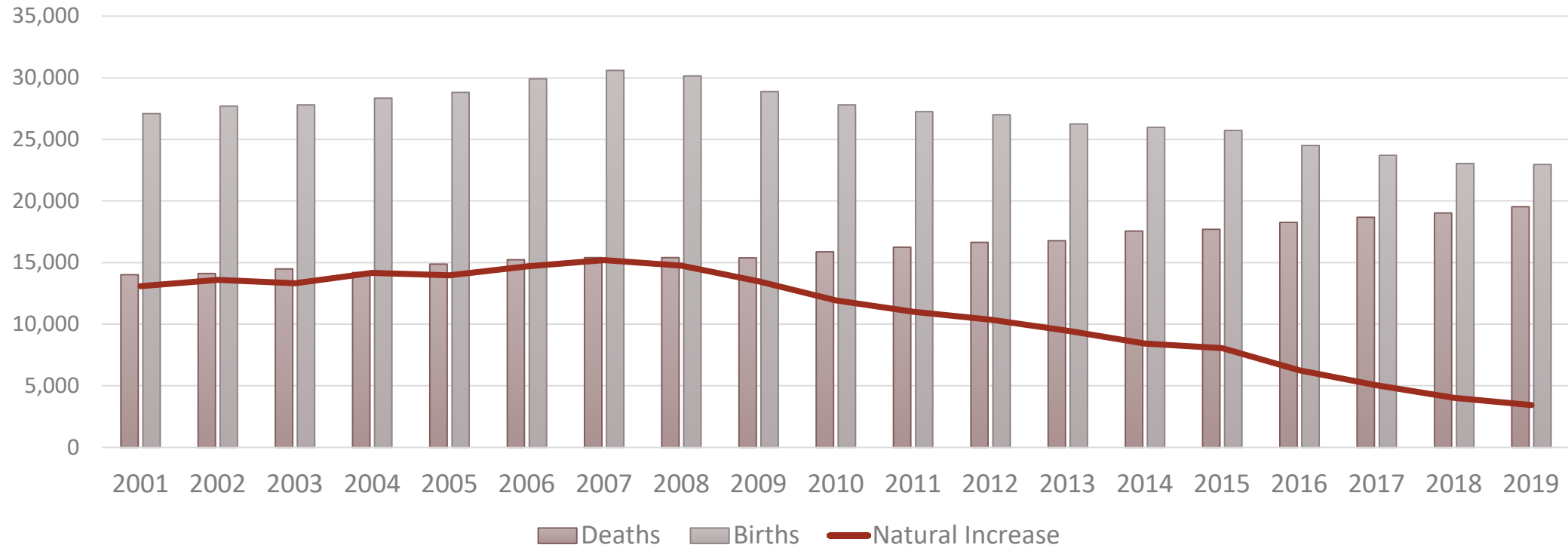
Declining Fertility

# Mortality



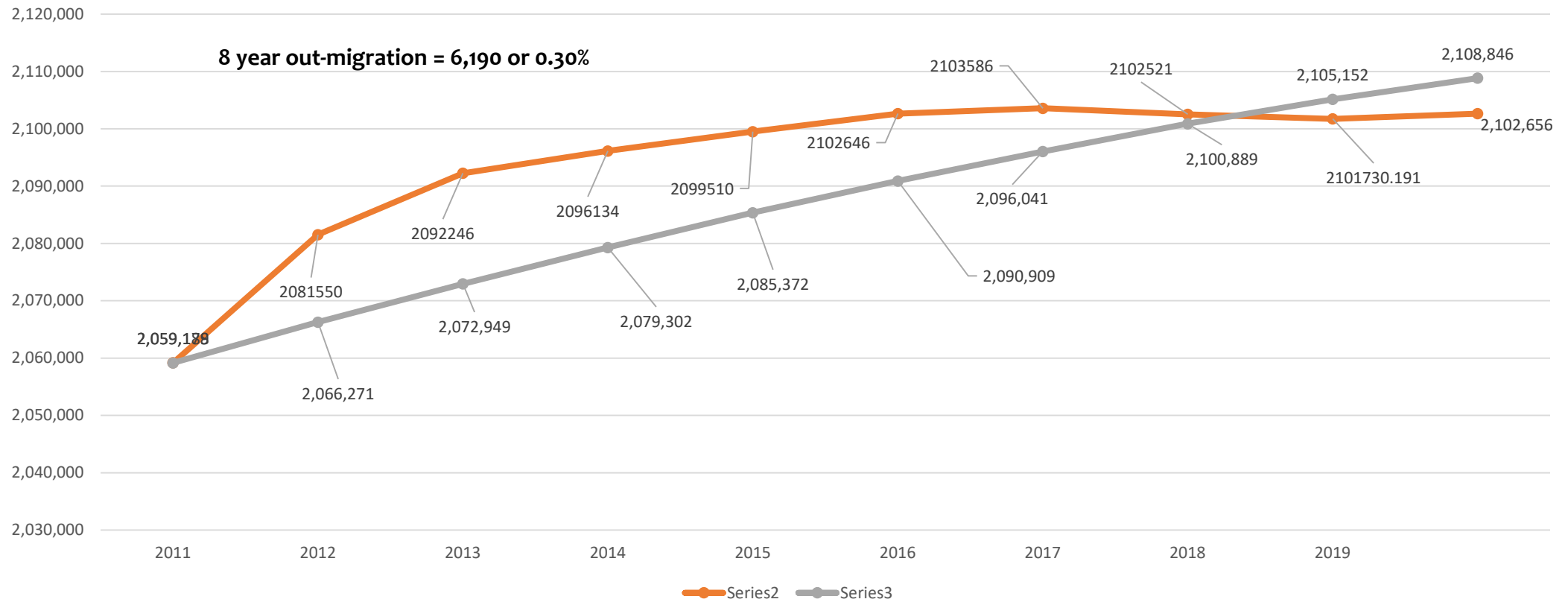
- Total deaths increasing due to aging population
- Mortality rates also increasing slightly
- People are less likely to live long lives if they are poor, get little exercise or lack access to health care (Dwyer-Lindgren, Bertozzi-Villa, Stubbs, et al., 2017).

Decline in natural increase since last Decennial Census



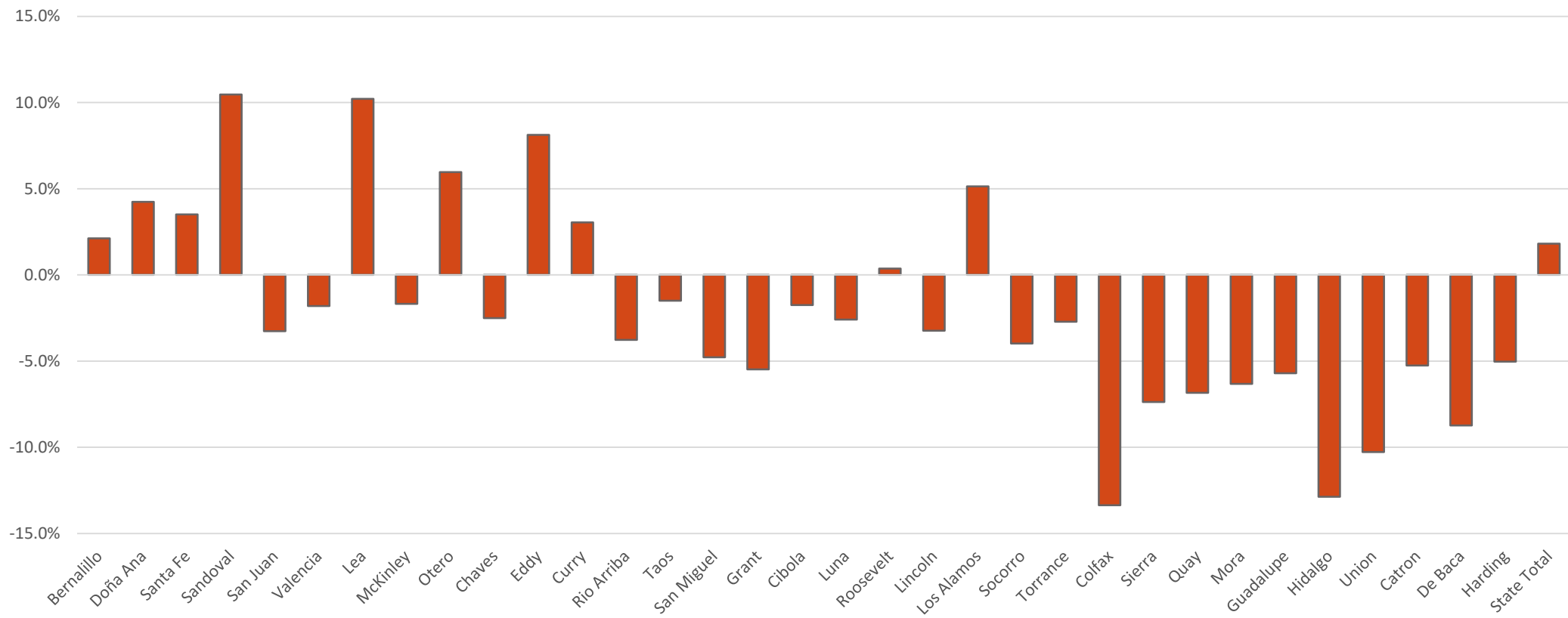
# Births, Deaths, and Natural Increase in New Mexico 2001-2018

# NM State Total Vs. Natural Increase 2010-2018





# Approximate Net Migration 2002-2018

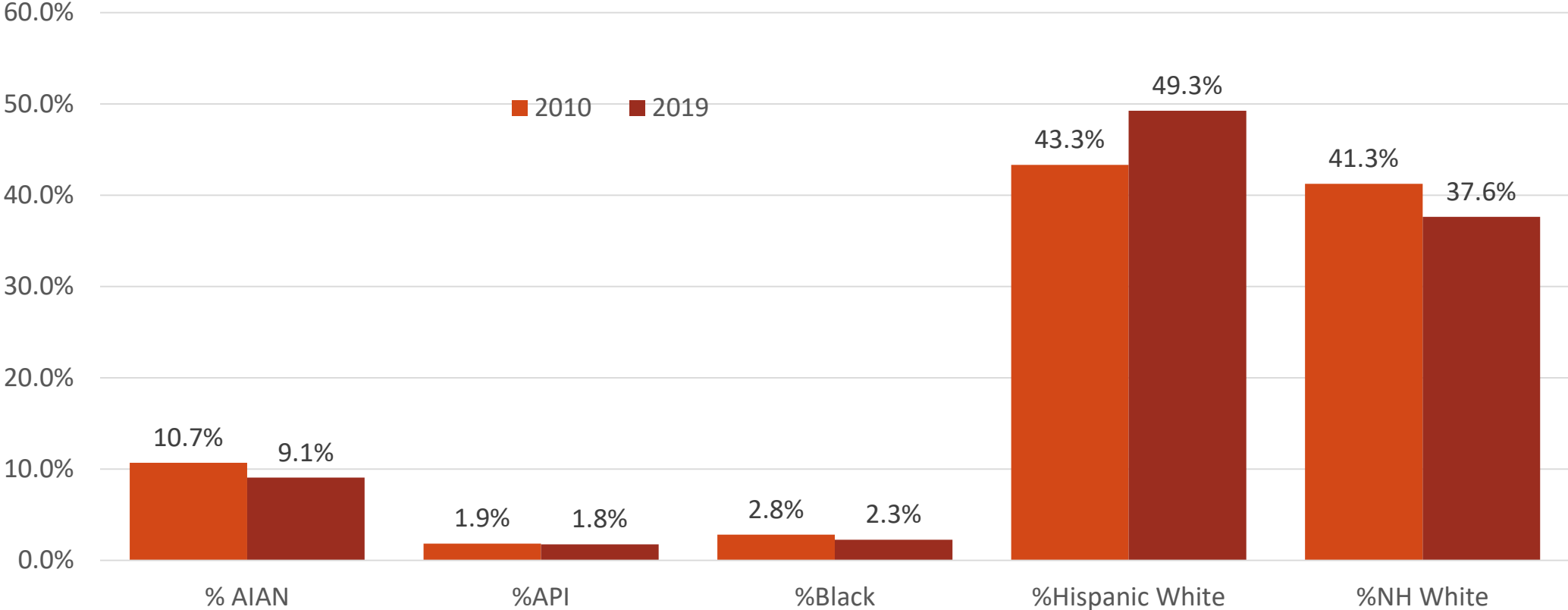


# Population Change by County 2010-2018

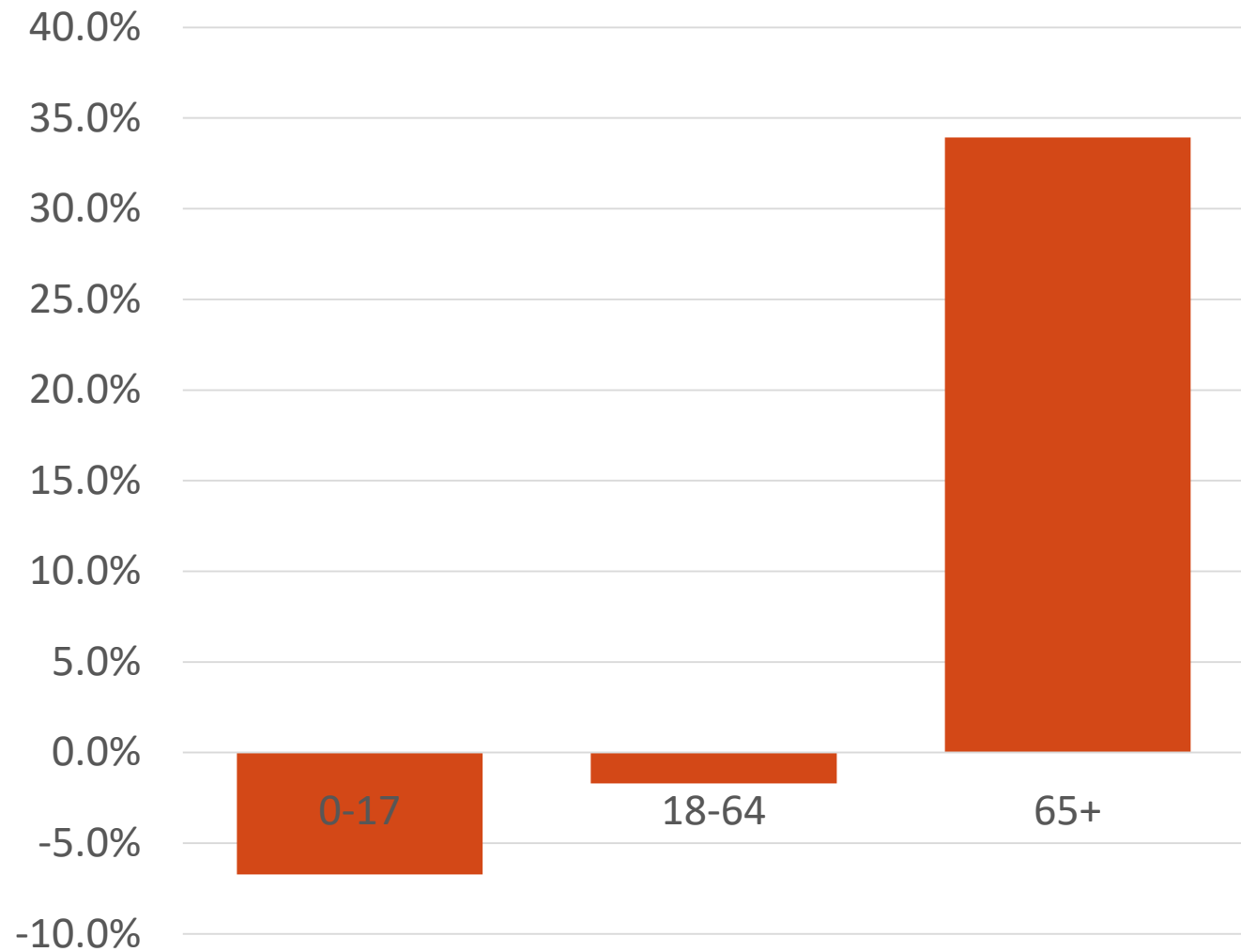
Note: Counties are listed from largest to smallest.

Source: UNM Geospatial and Population Studies ([gps.unm.edu](http://gps.unm.edu))

# NM Racial Composition 2019



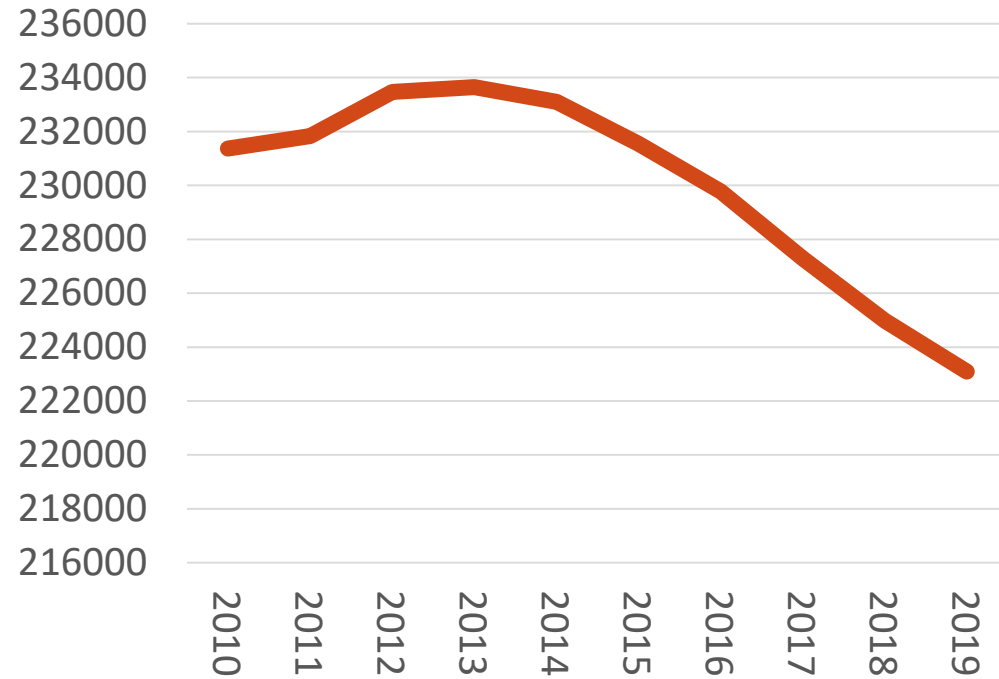
# Nine Year Growth By Age



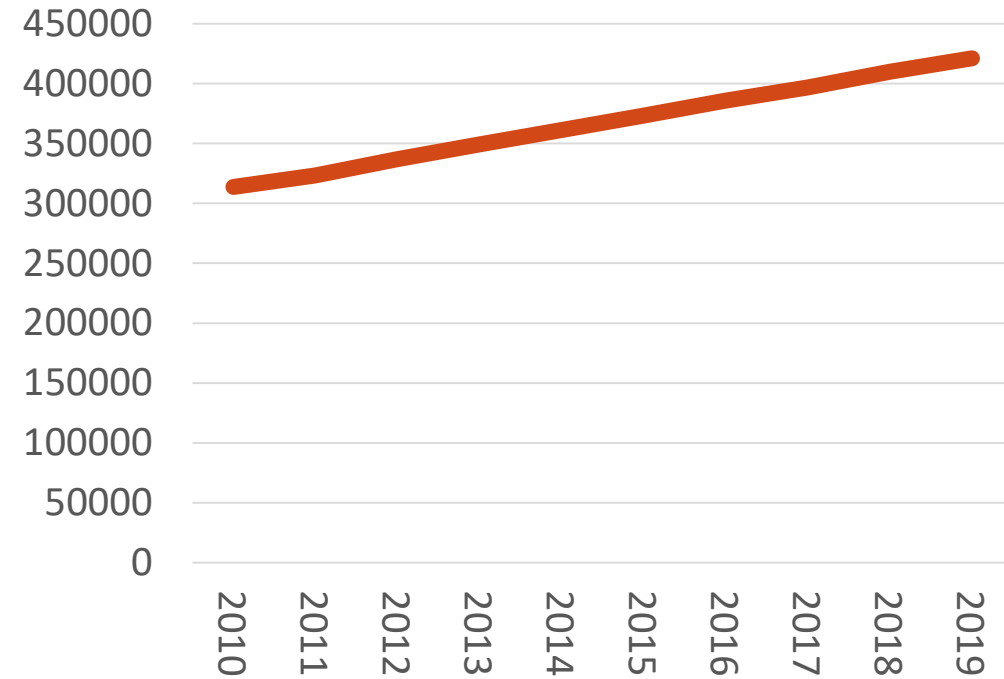
# Aging Population

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## K- 8 SCHOOL ENROLLMENT



## MEDICARE ENROLLMENT



# Population Projections: Cohort Component Method

$$Pop_{n+x} = Pop_n + Births - Deaths + Net Migration$$

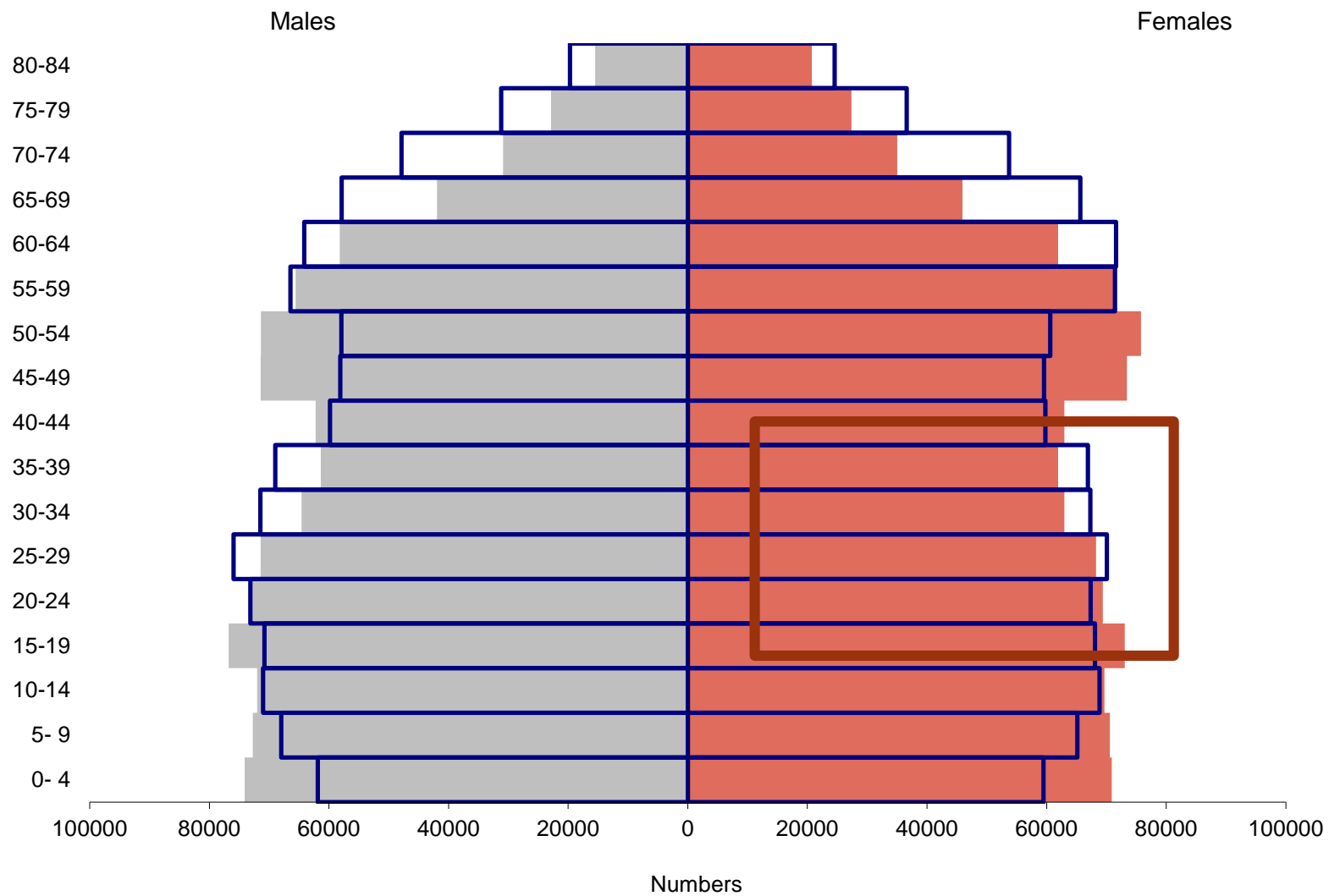
Population Size and Age Structure

Fertility Trends

Mortality Trends

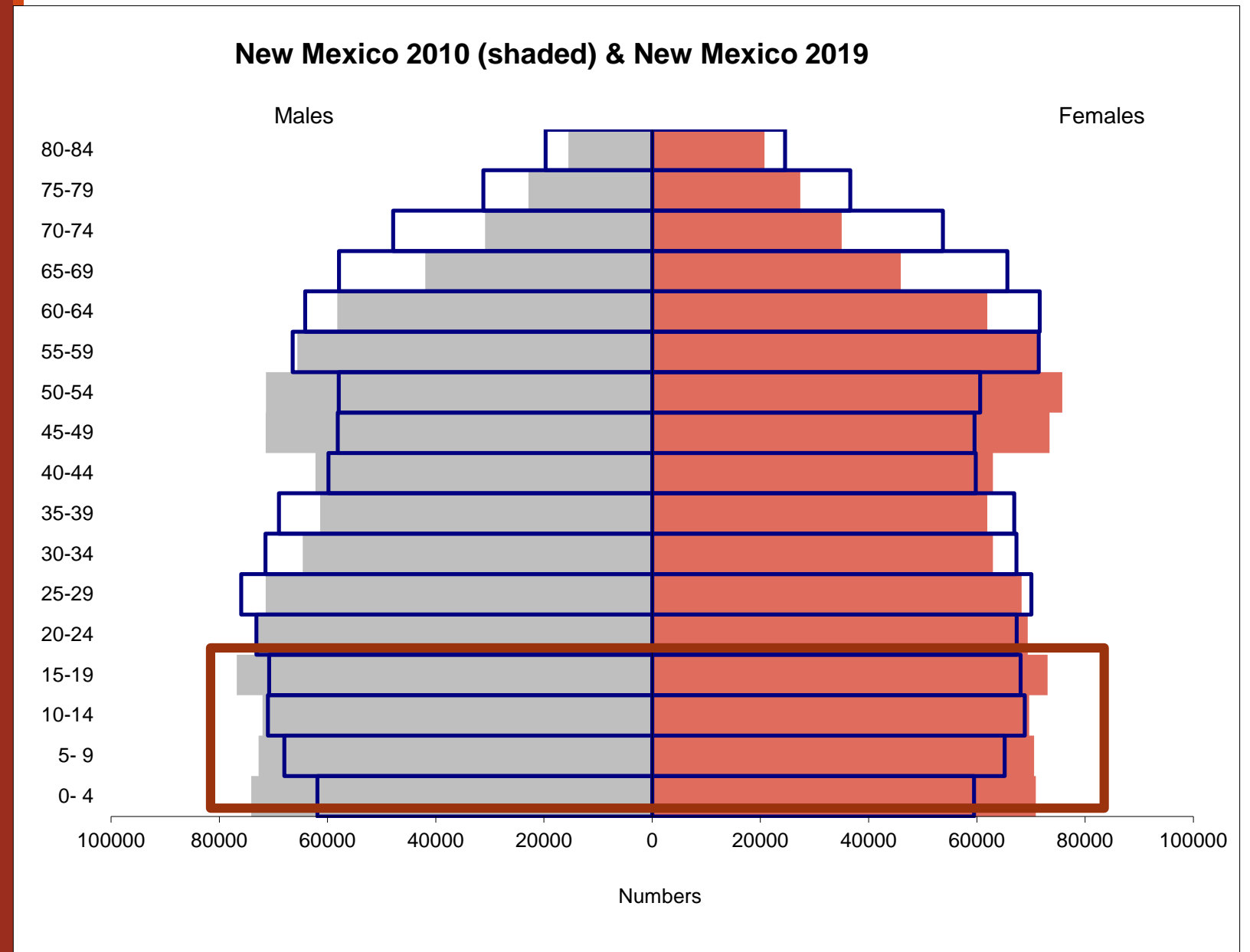
Migration Trends

### New Mexico 2010 (shaded) & New Mexico 2019



Changing Age Structure

# Changing Age Structure





## Fertility

*Will fertility continue to decline as it has been? Will it begin to rise, or will it remain stable?*

- **Assumption:** Fertility will continue to decline for Hispanic women, bring the overall state fertility rate down to the current rate for non-Hispanic women



## Mortality

Life expectancy has increased for much of the past century but has been fairly stable in recent years.

- *Will we continue to live longer, or will poorer health behaviors lead to shorter lives?*
- **Assumption:** Mortality will remain at current rates

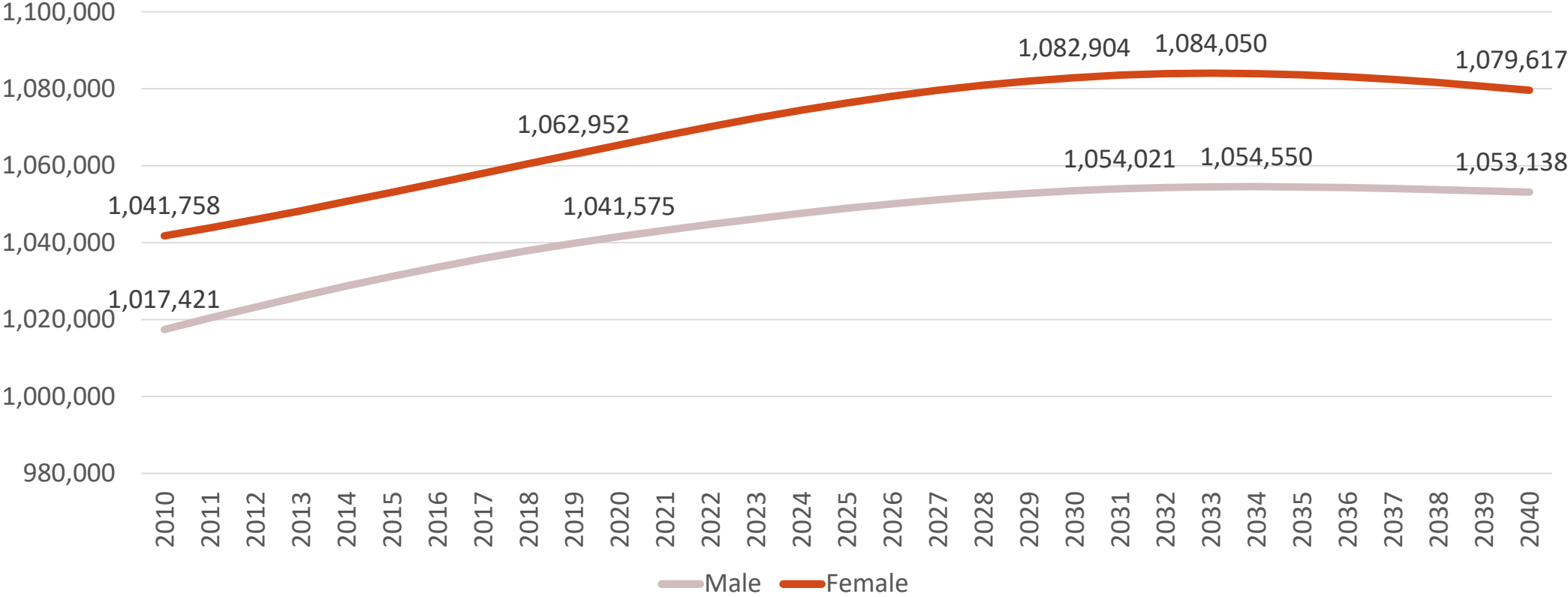


## Migration

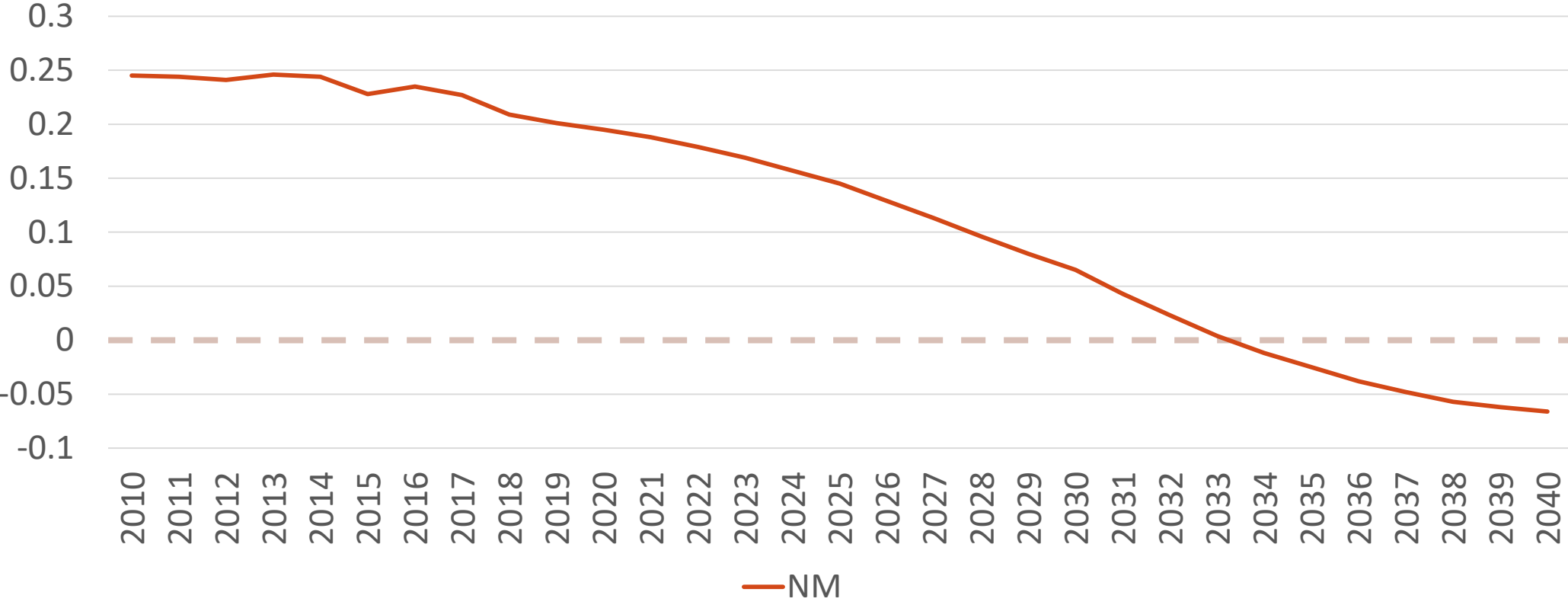
**Assumption:** Migration from 2020-2040 will gradually increase until it reaches the average of migration patterns observed in the 2000s and the 2010s, thus allowing for periods of higher migration and lower migration.

# Assumptions

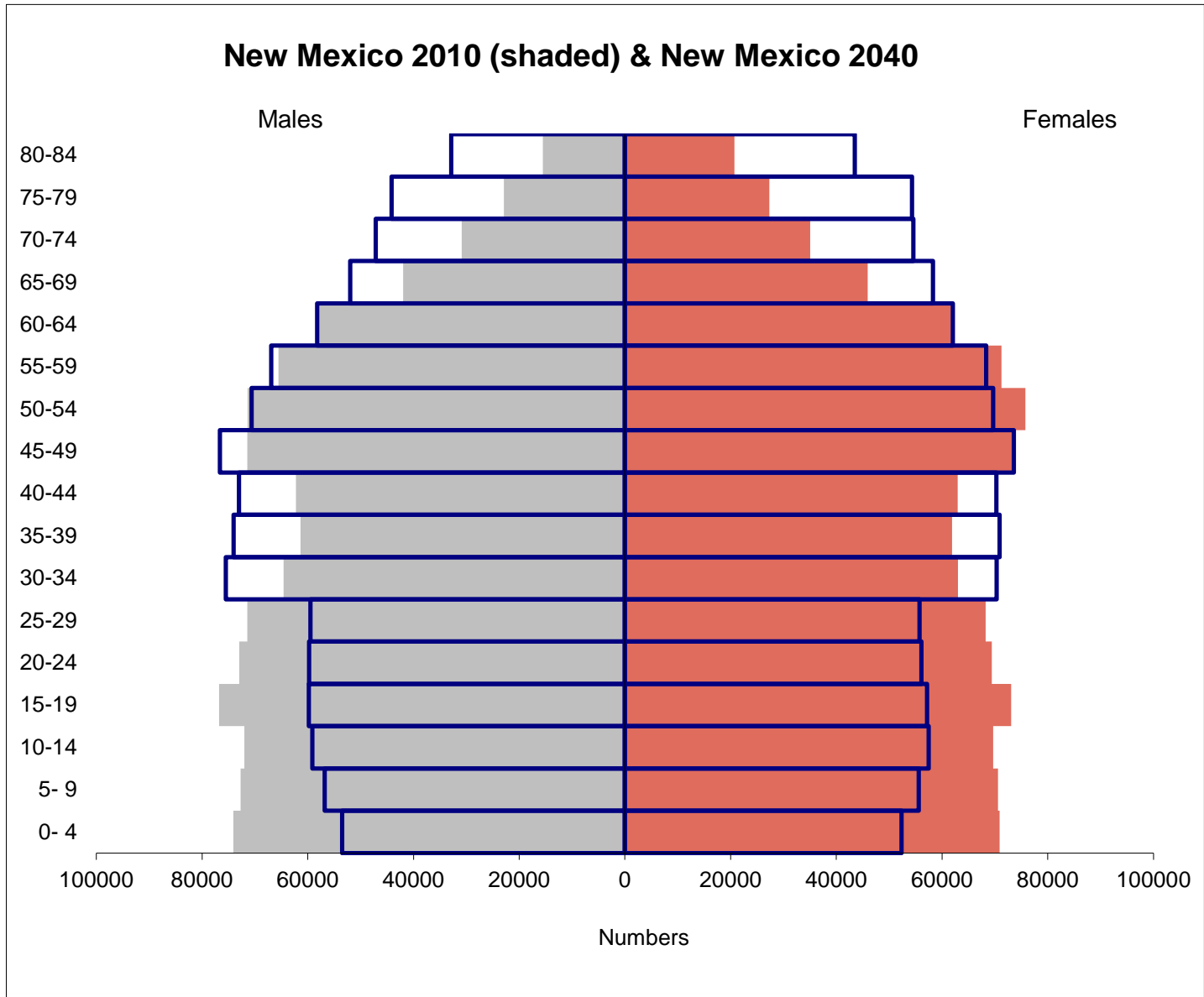
# NM Population Projection



# Projected Growth Rate for New Mexico



# Changing Age Structure



Increase in fertility  
among residents  
(not particularly  
realistic)

Reduce out  
migration of young  
people

Attract young  
people to the state

Increased births due  
to more people of  
childbearing age

Factors that could alter our trajectory

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**Questions or  
Comments???**

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