

Demographic Change and Human Capital in Mexico and Texas

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Jno. E. Owens Memorial Foundation Conference
*The Political Economy of Texas-Mexico:
Common Bonds, Shared Challenges*

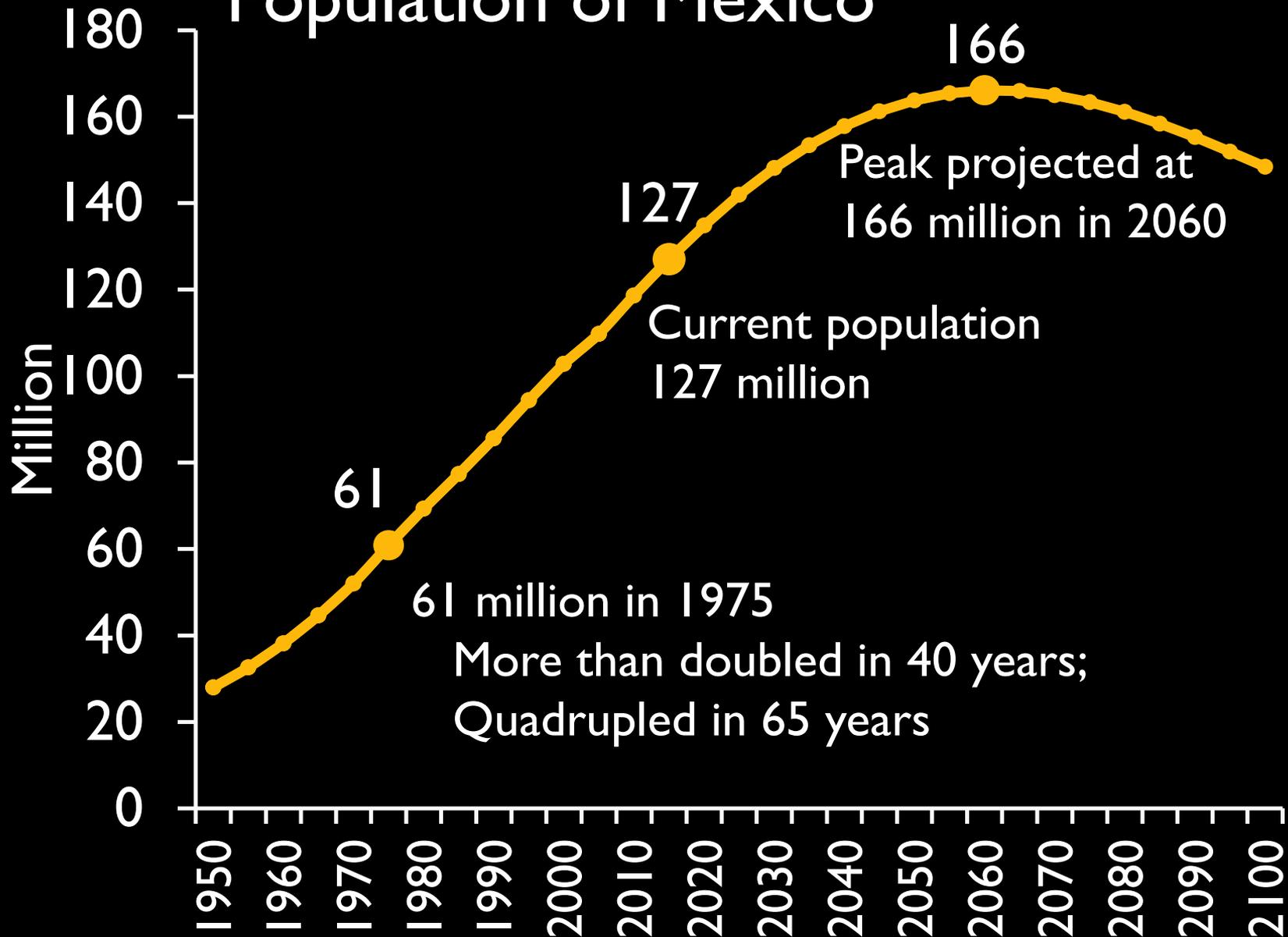
April 7-8, 2016

Federal Reserve Bank of Dallas

Questions?

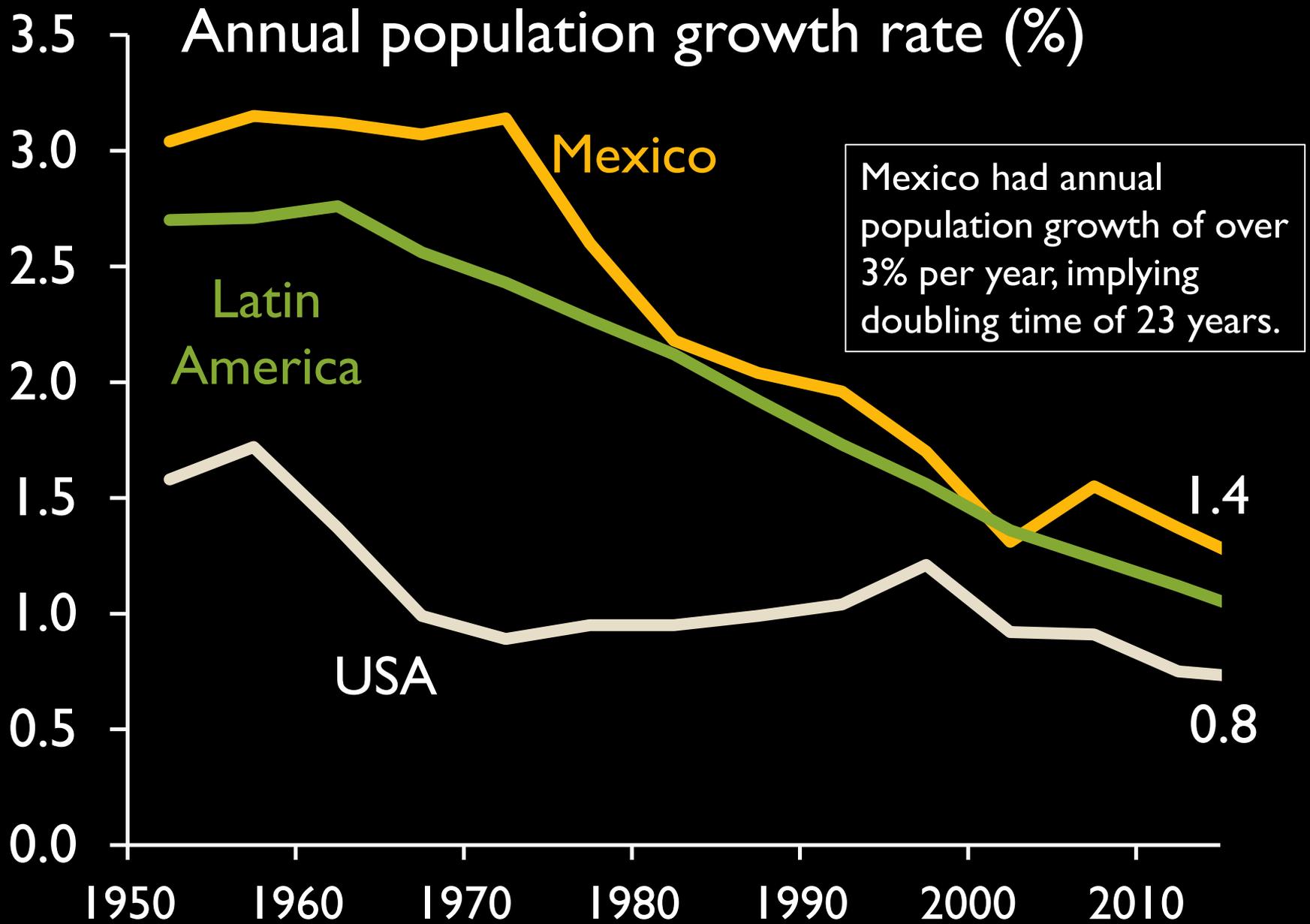
- How has population growth changed in Mexico in recent decades?
 - How does it compare to population growth in US
 - What drove population growth?
 - Why has it changed?
 - What can we expect in the future?
- How are demographic changes related to changes in human capital?
- How does education of Mexico youth compare to education of Texas youth?
- Implications for labor market competition

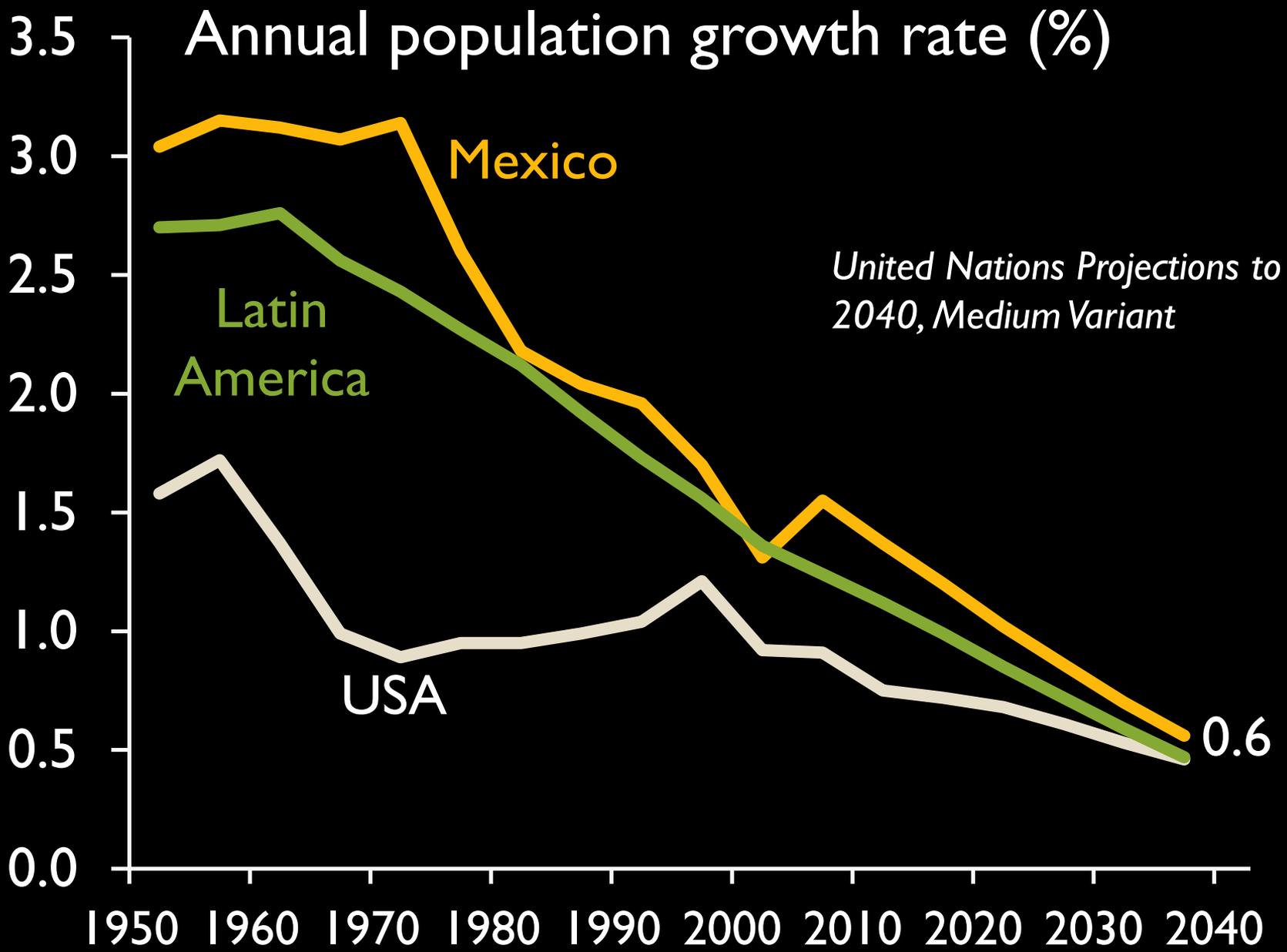
Population of Mexico



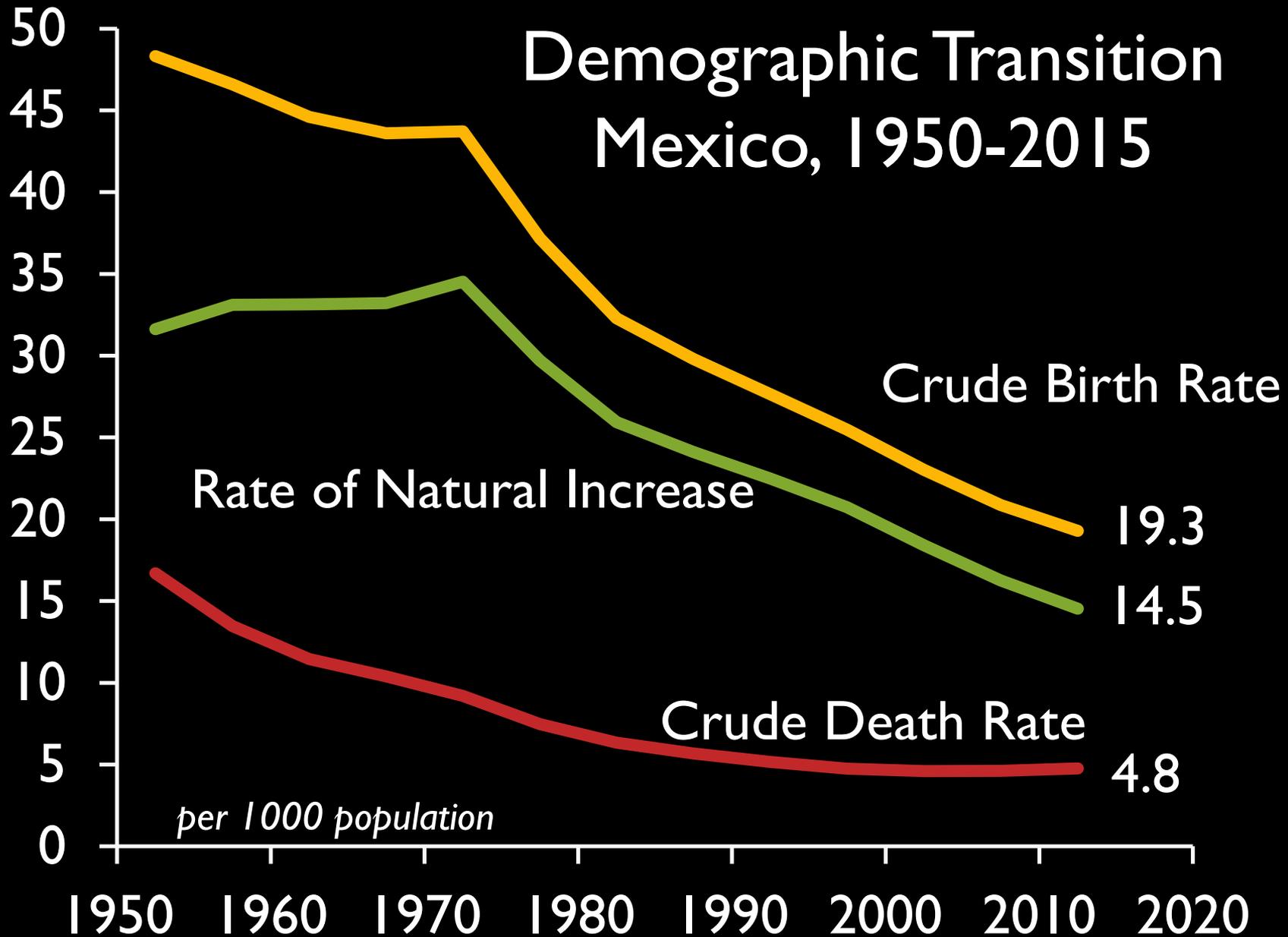
UN estimates and medium variant projections, 2015 revision

Annual population growth rate (%)

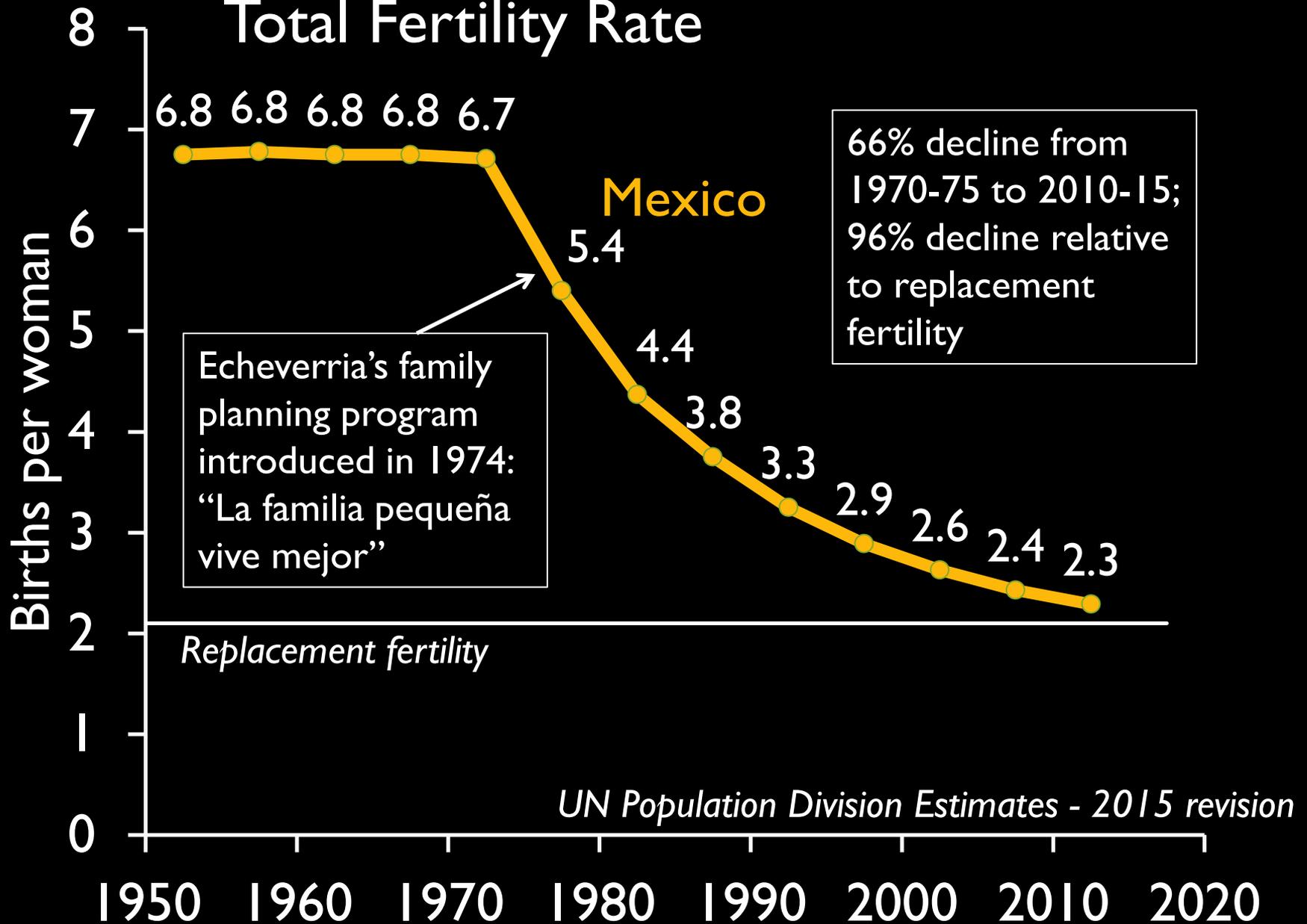




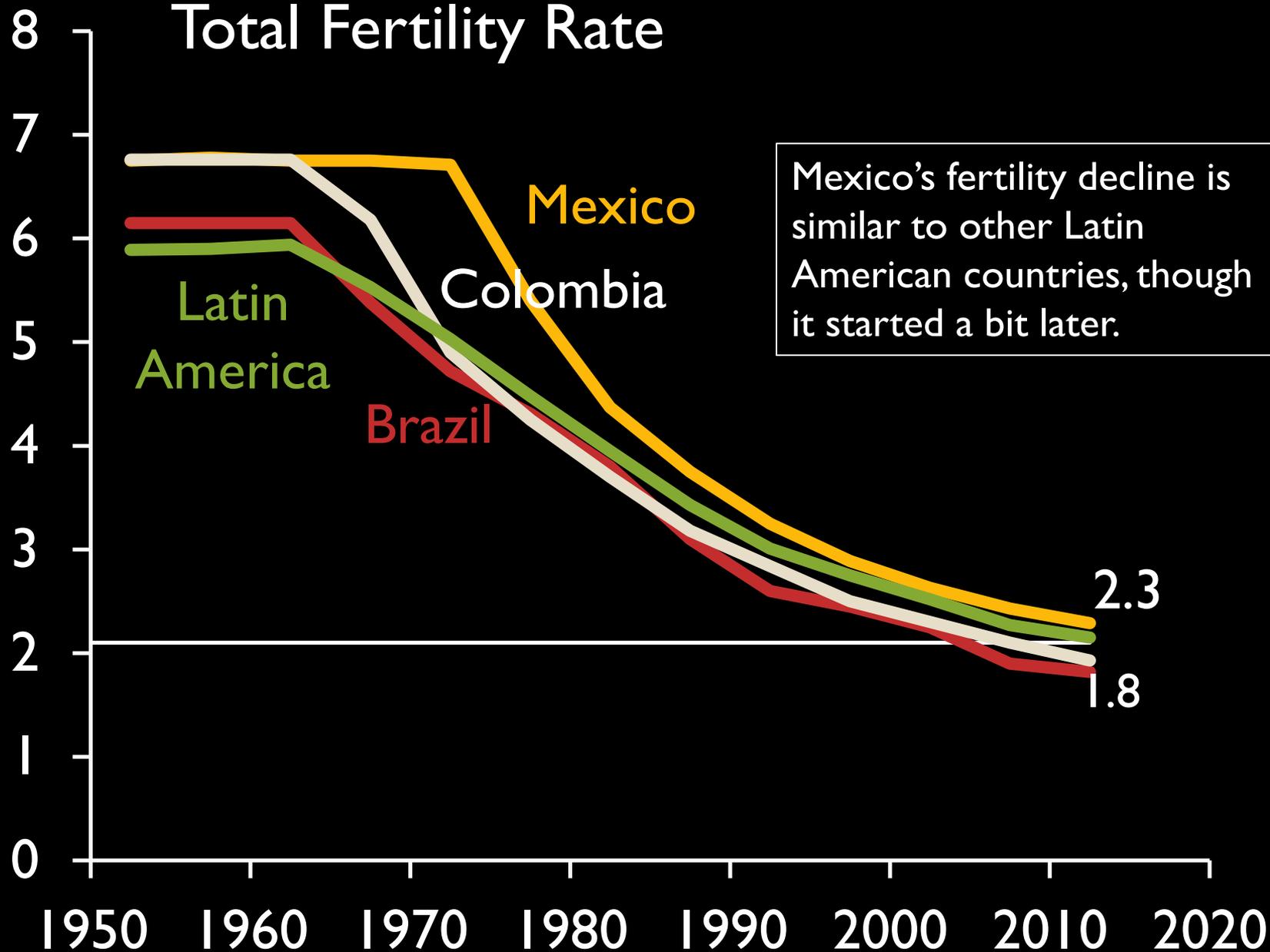
Demographic Transition Mexico, 1950-2015



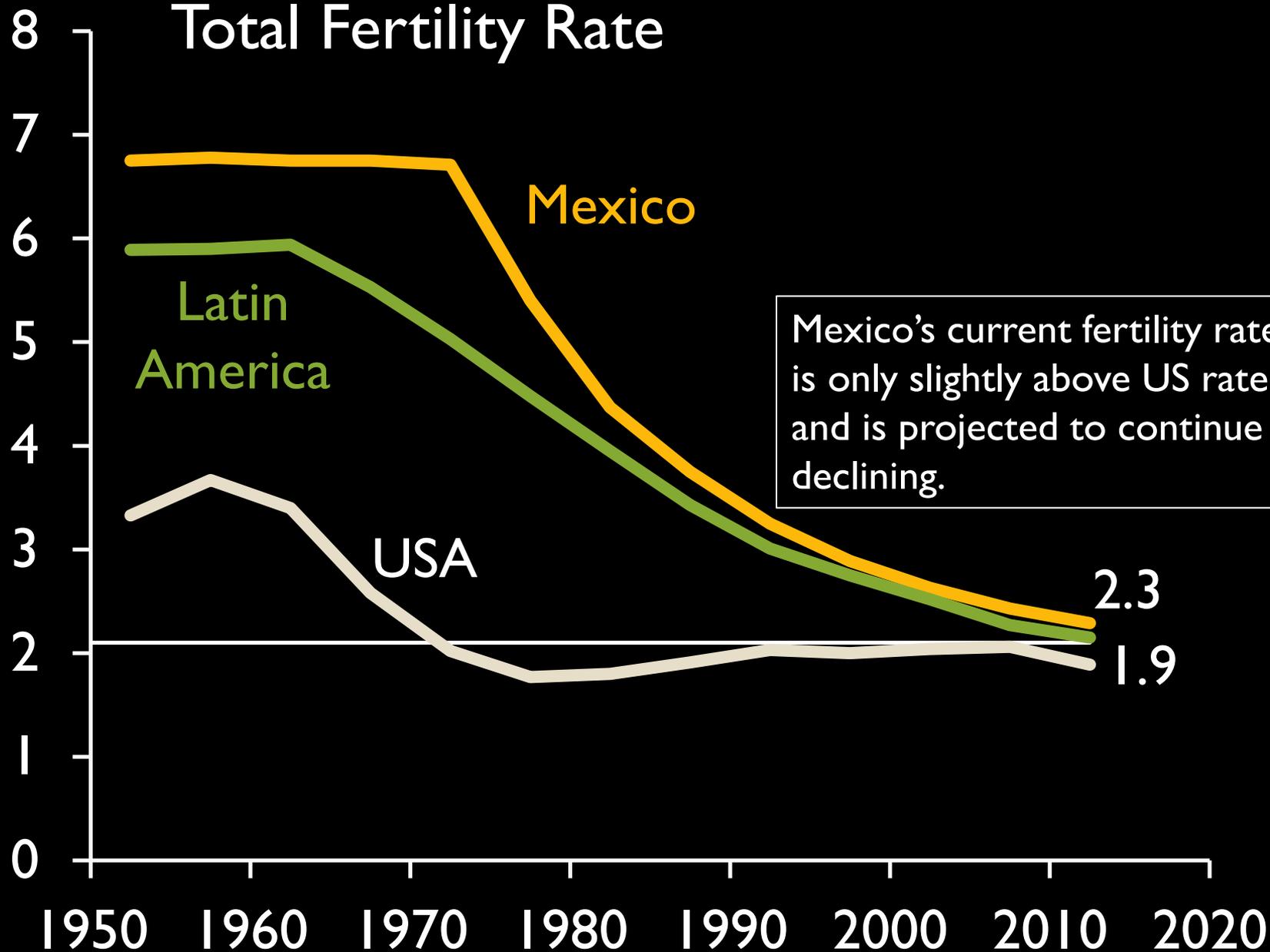
Total Fertility Rate



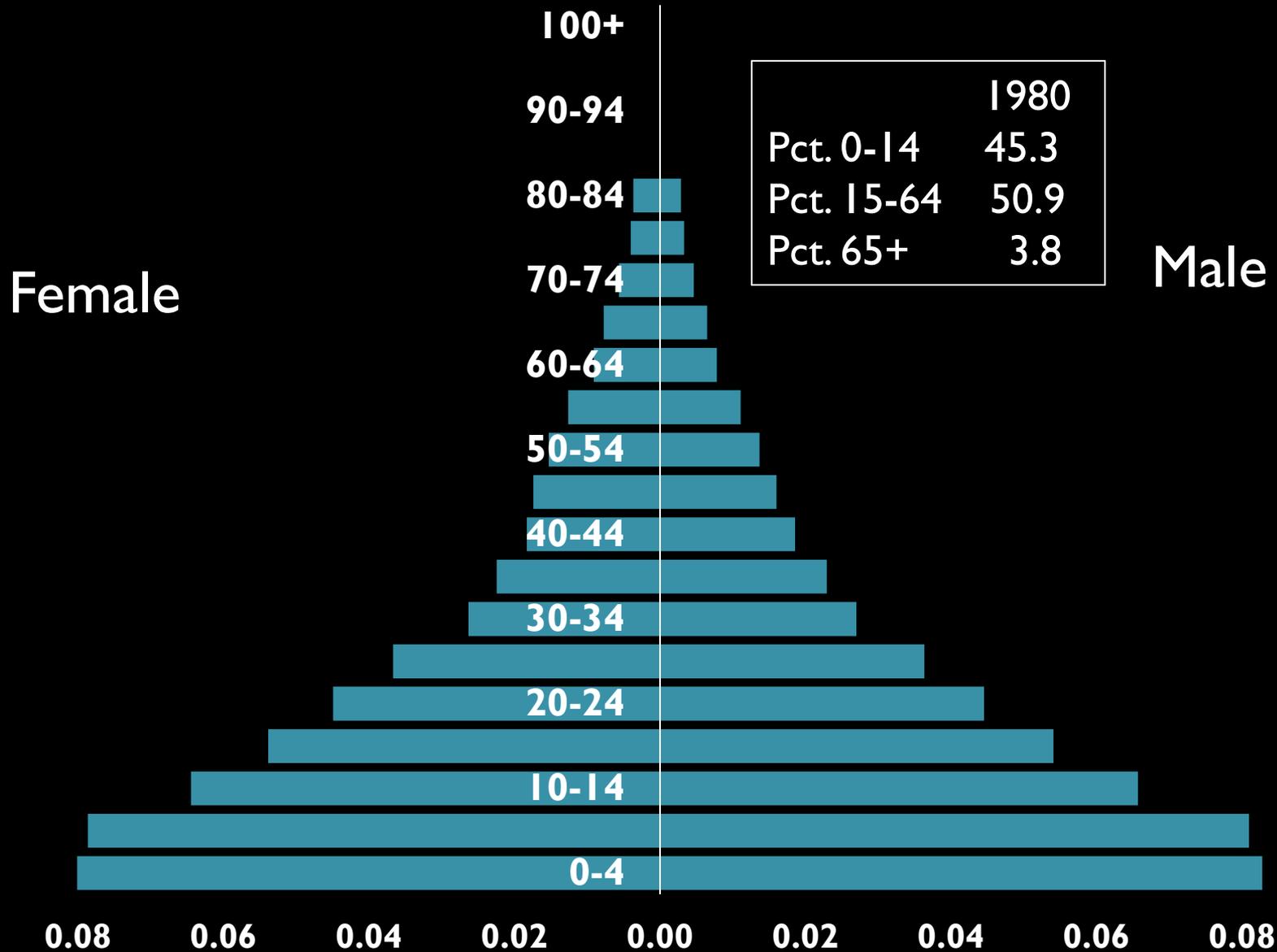
Total Fertility Rate



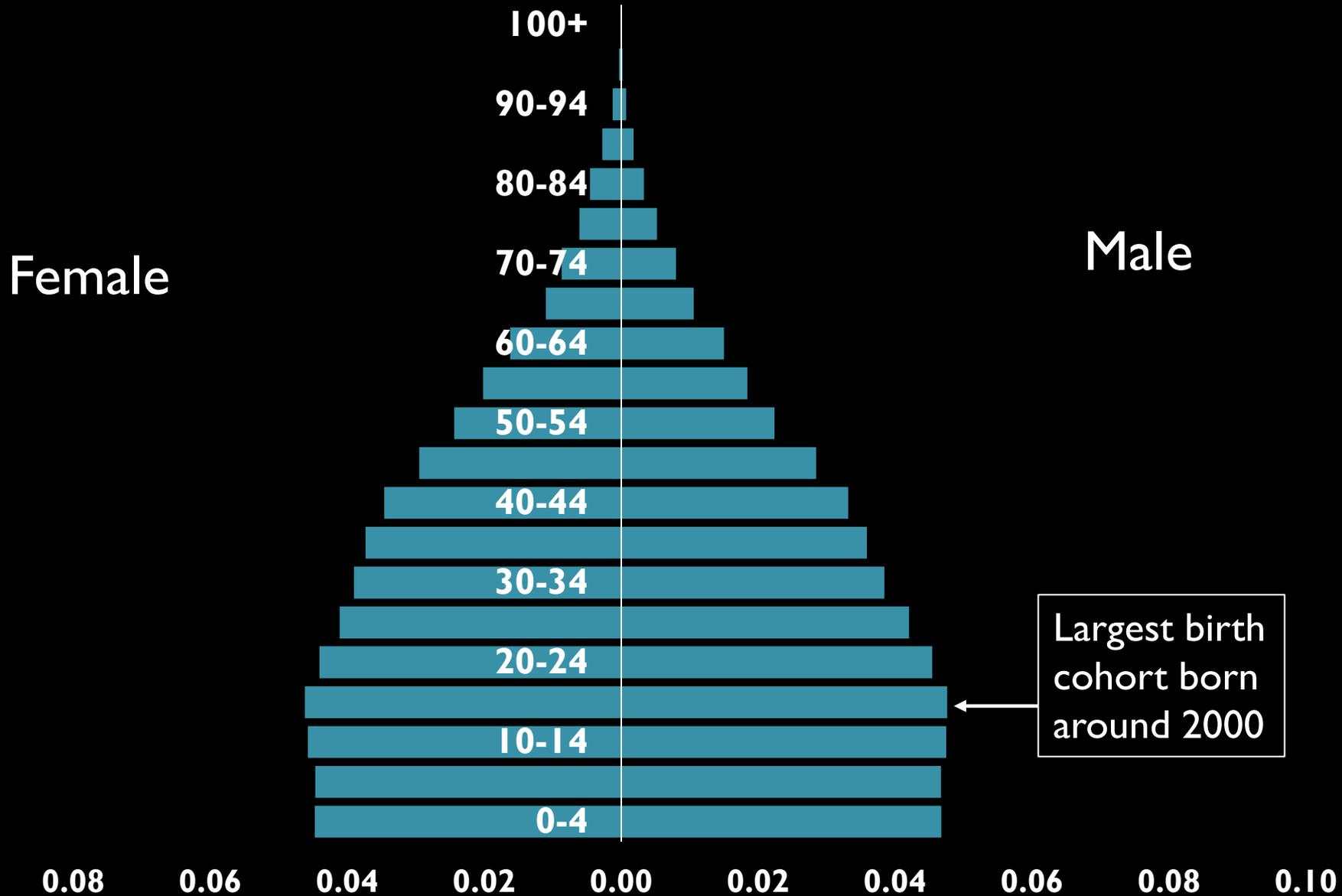
Total Fertility Rate



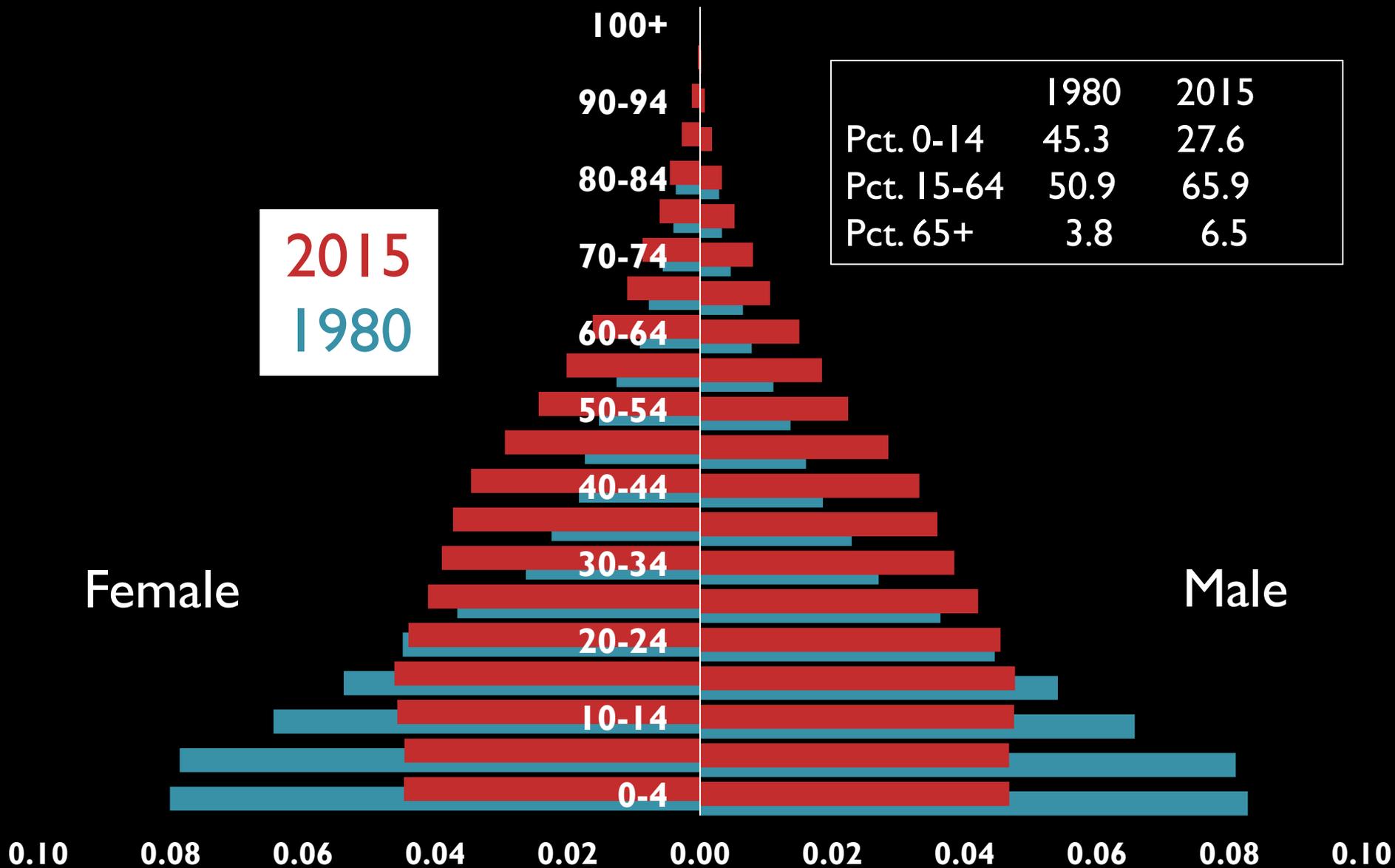
Percentage Age Distribution, Mexico 1980



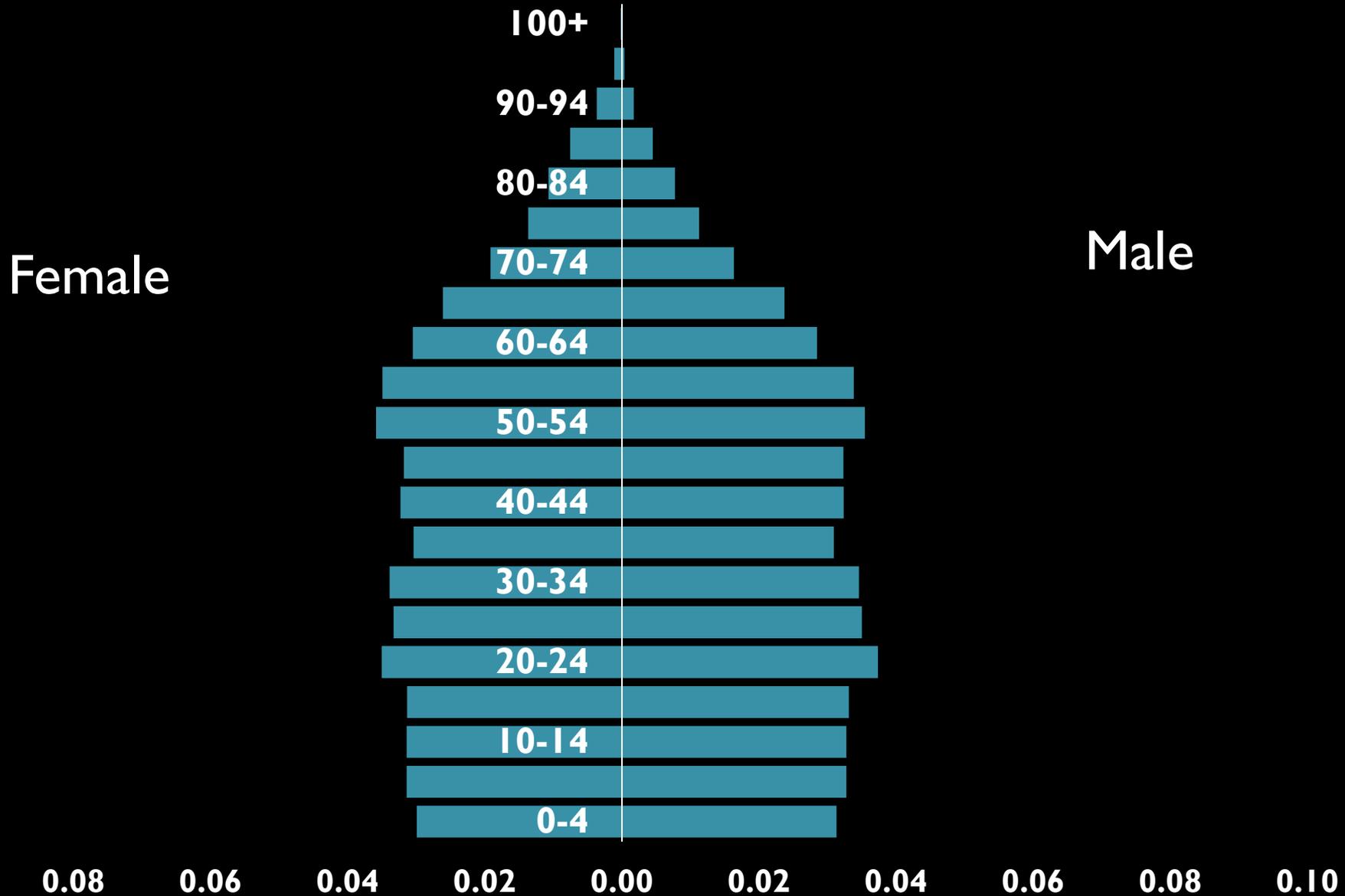
Percentage Age Distribution, Mexico 2015



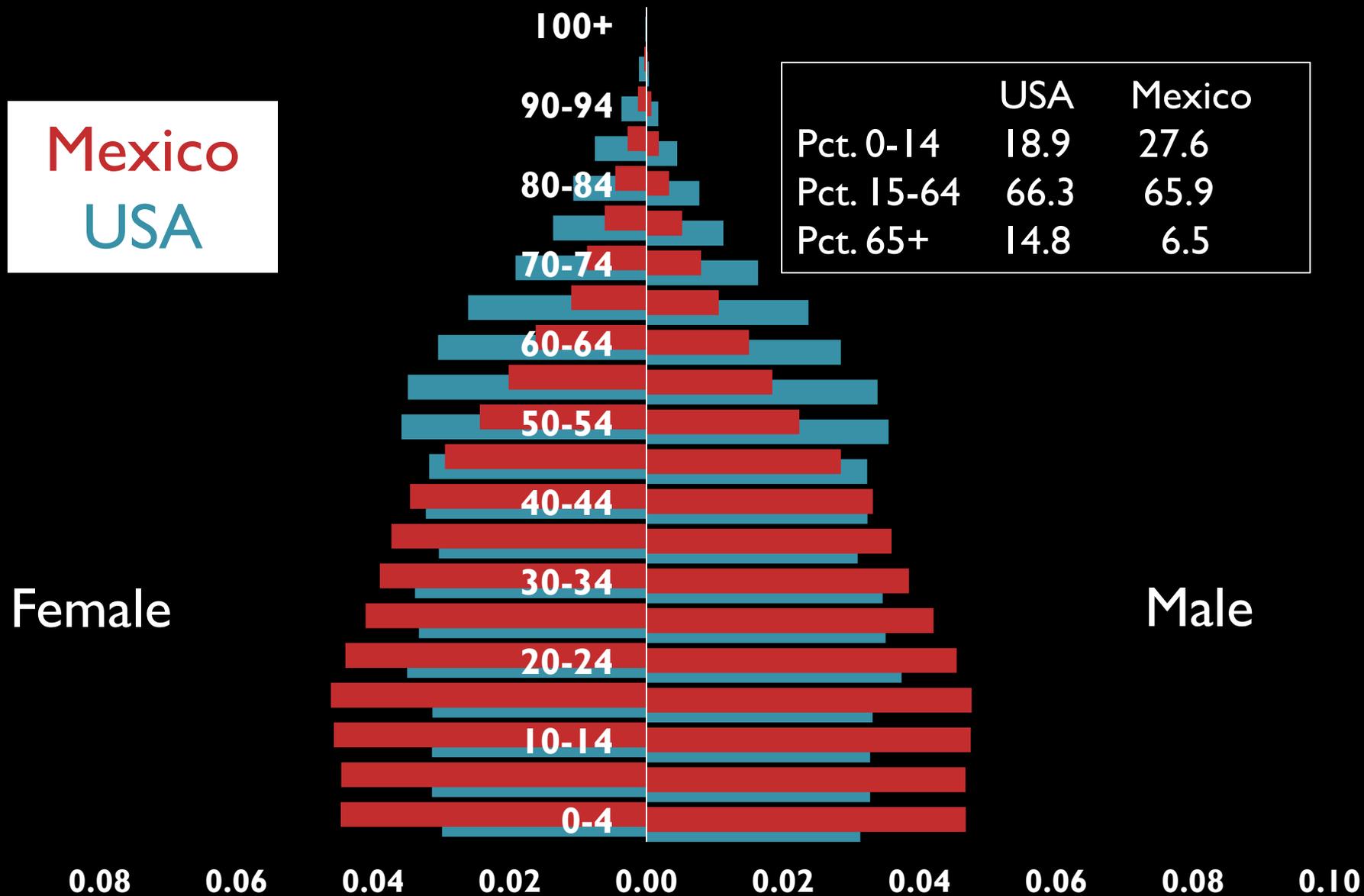
Percentage Age Distribution, Mexico 1980 and 2015



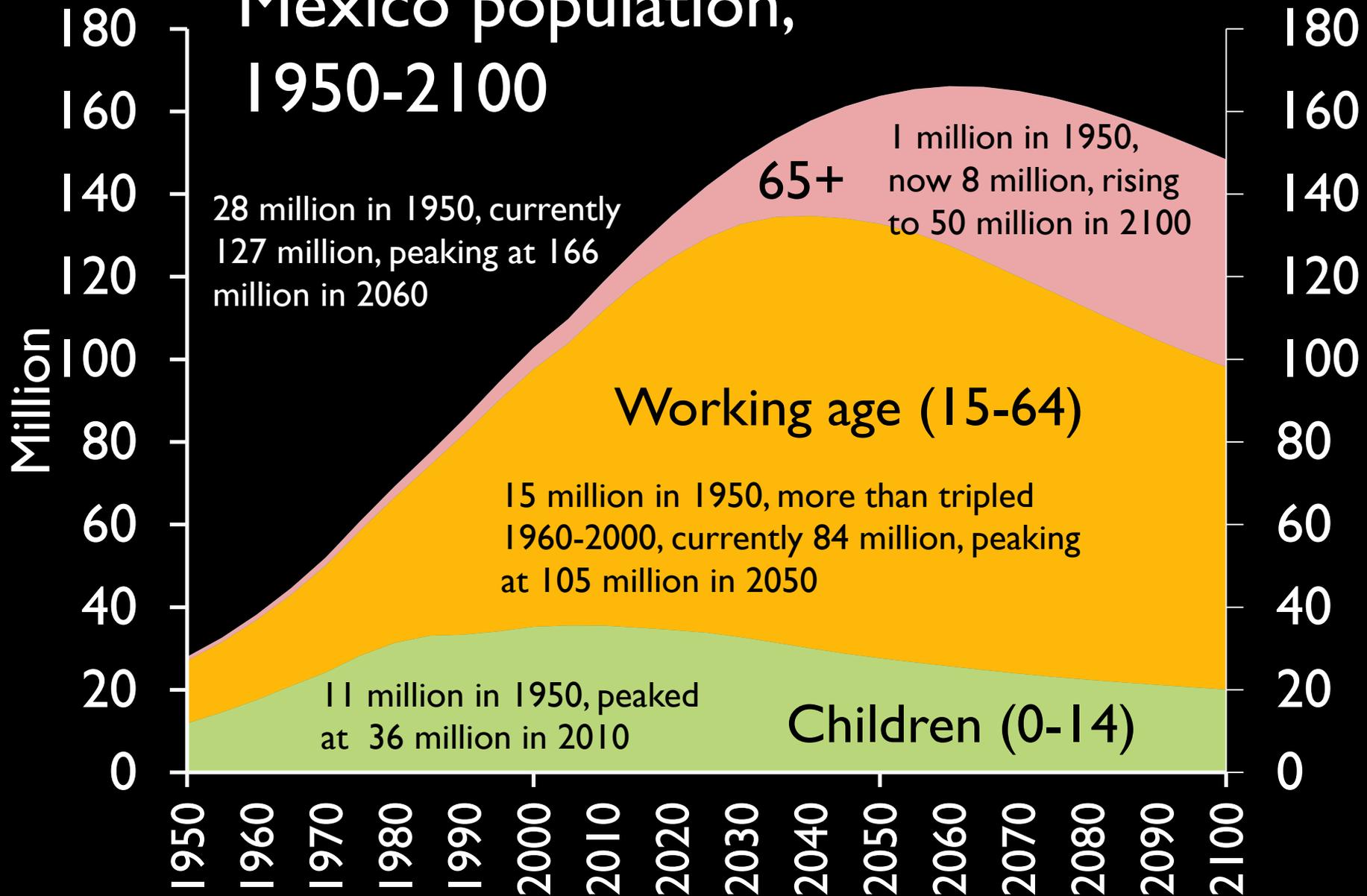
Percentage Age Distribution, USA 2015



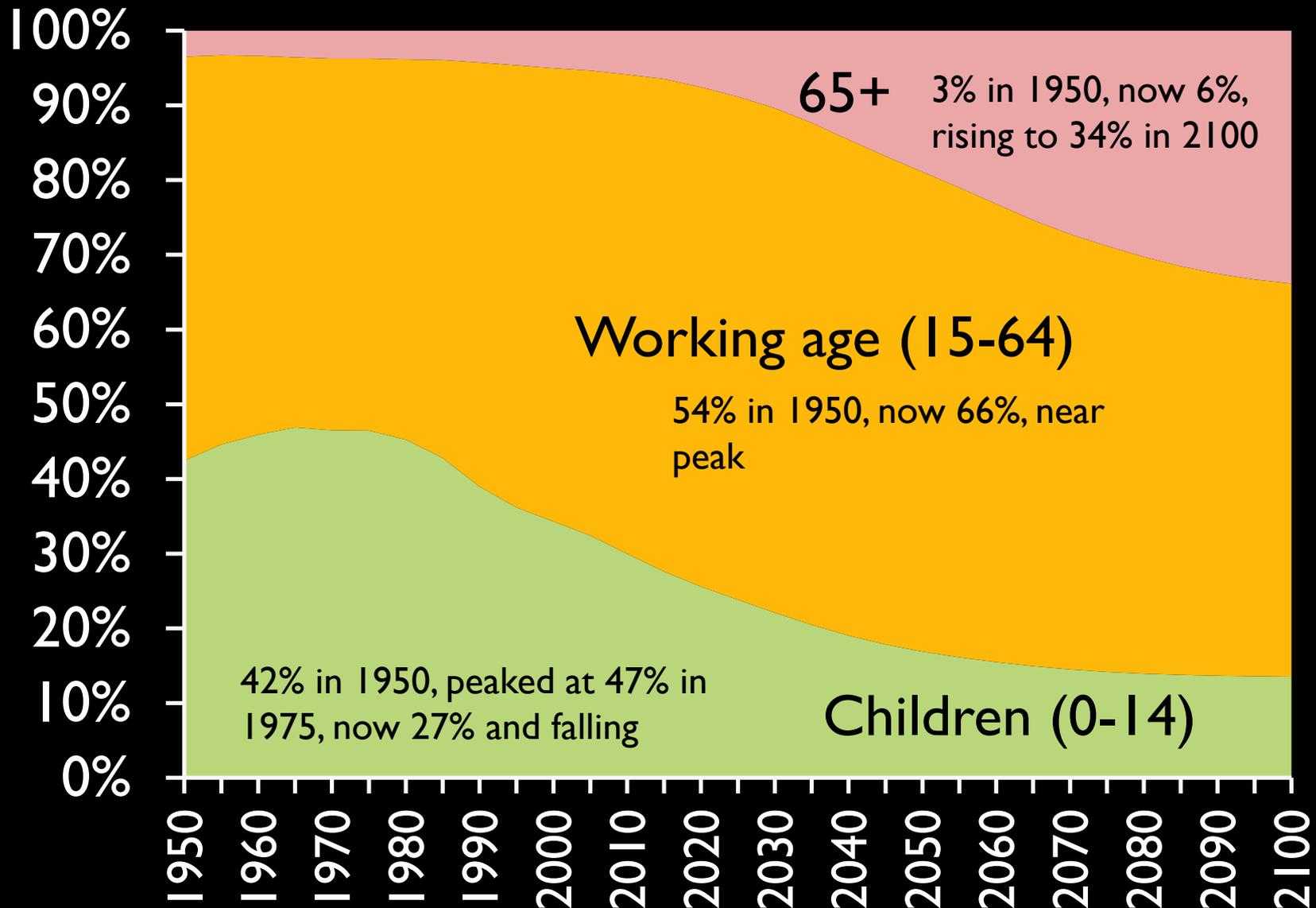
Percentage Age Distribution, Mexico and USA 2015



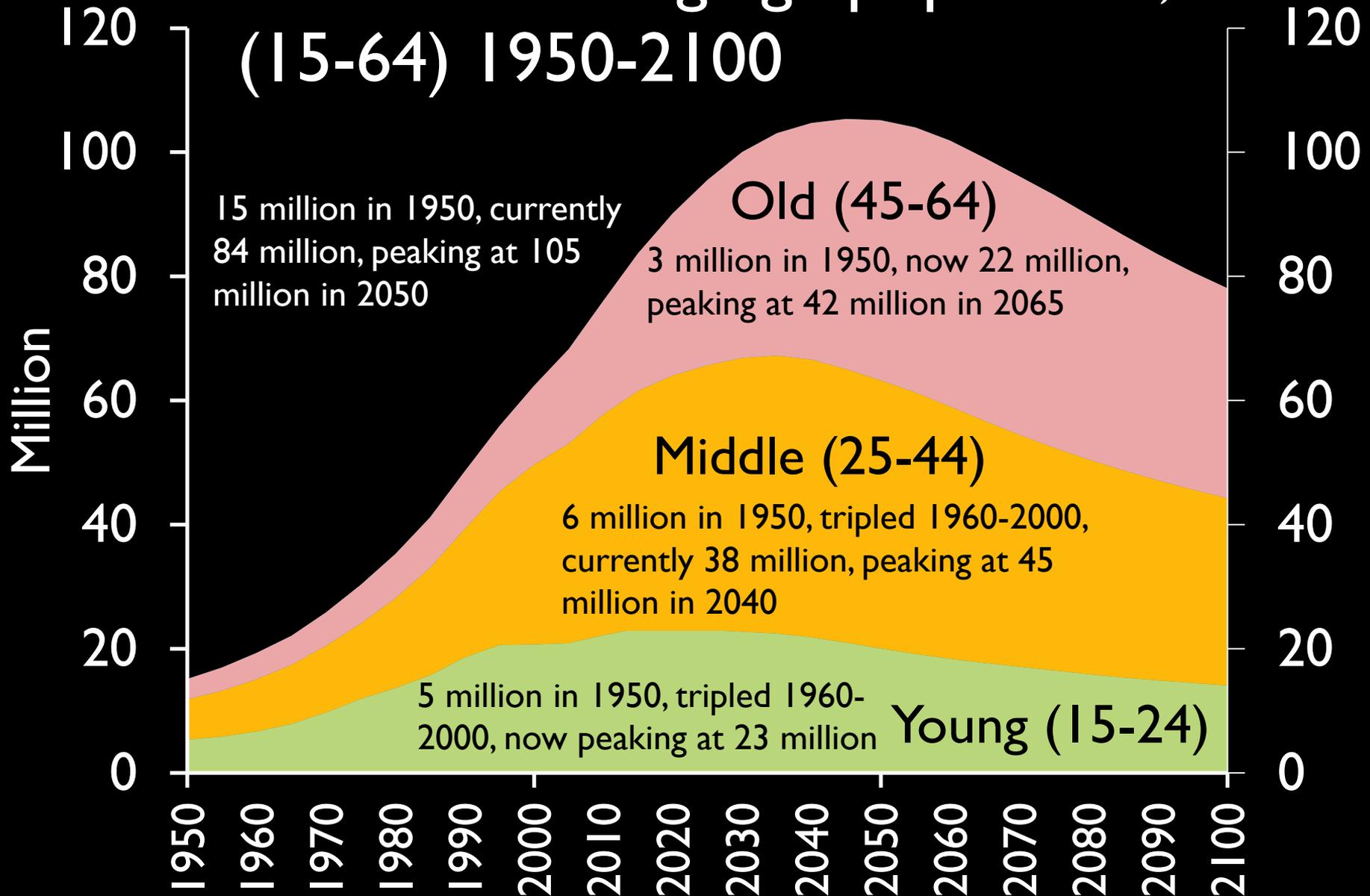
Mexico population, 1950-2100



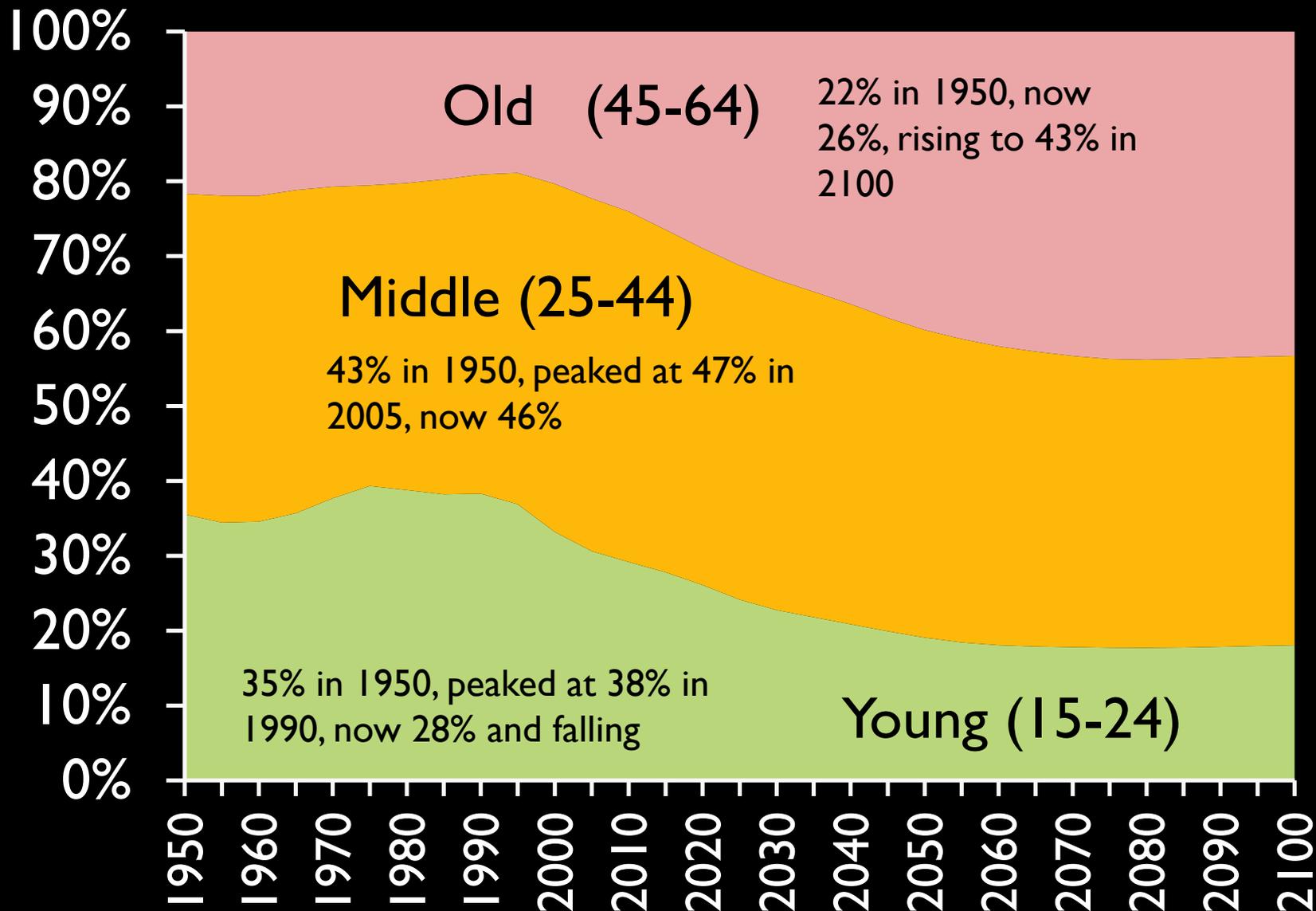
Mexico population, age distribution



Mexico working-age population, (15-64) 1950-2100



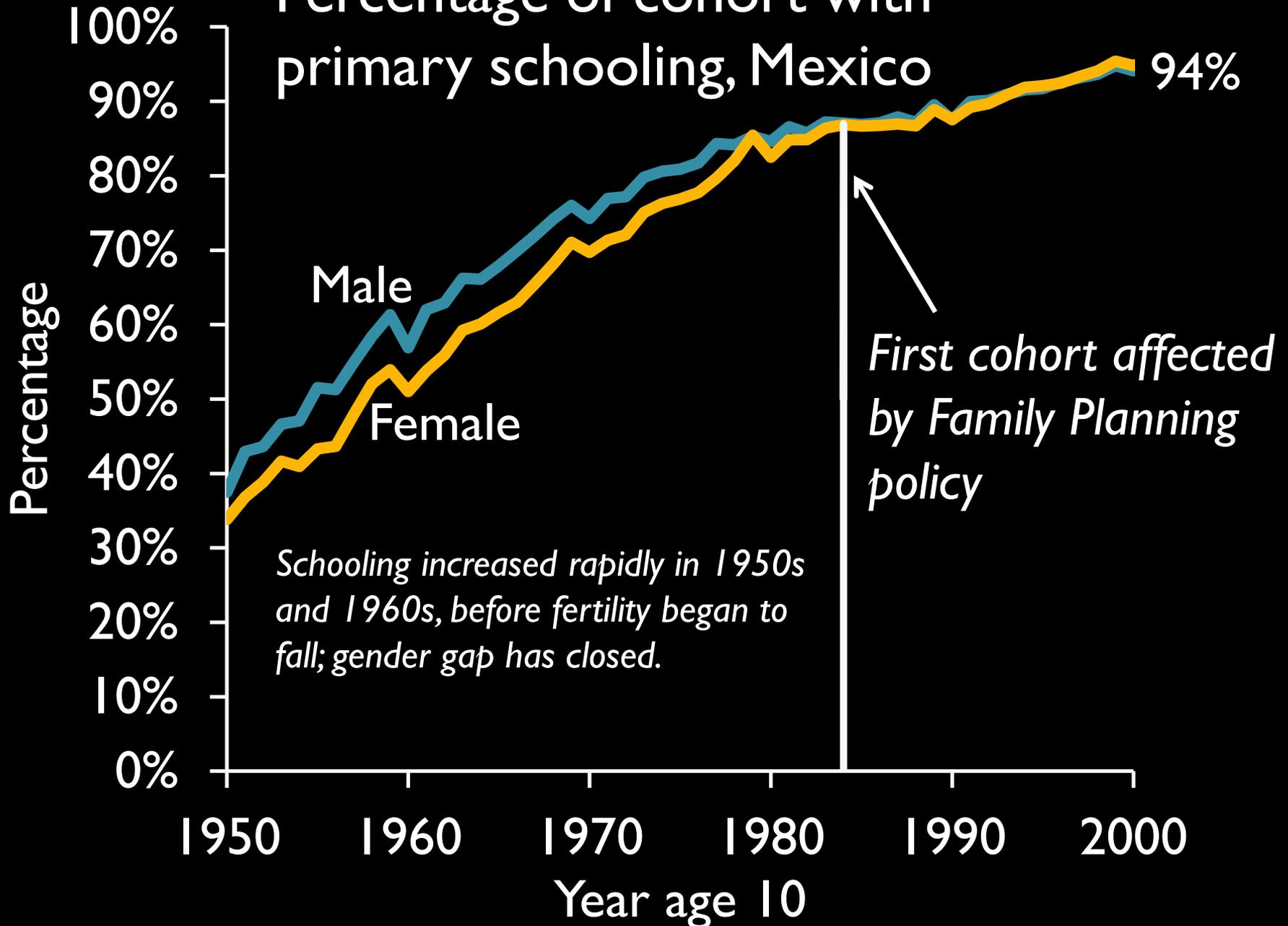
Mexico working-age population



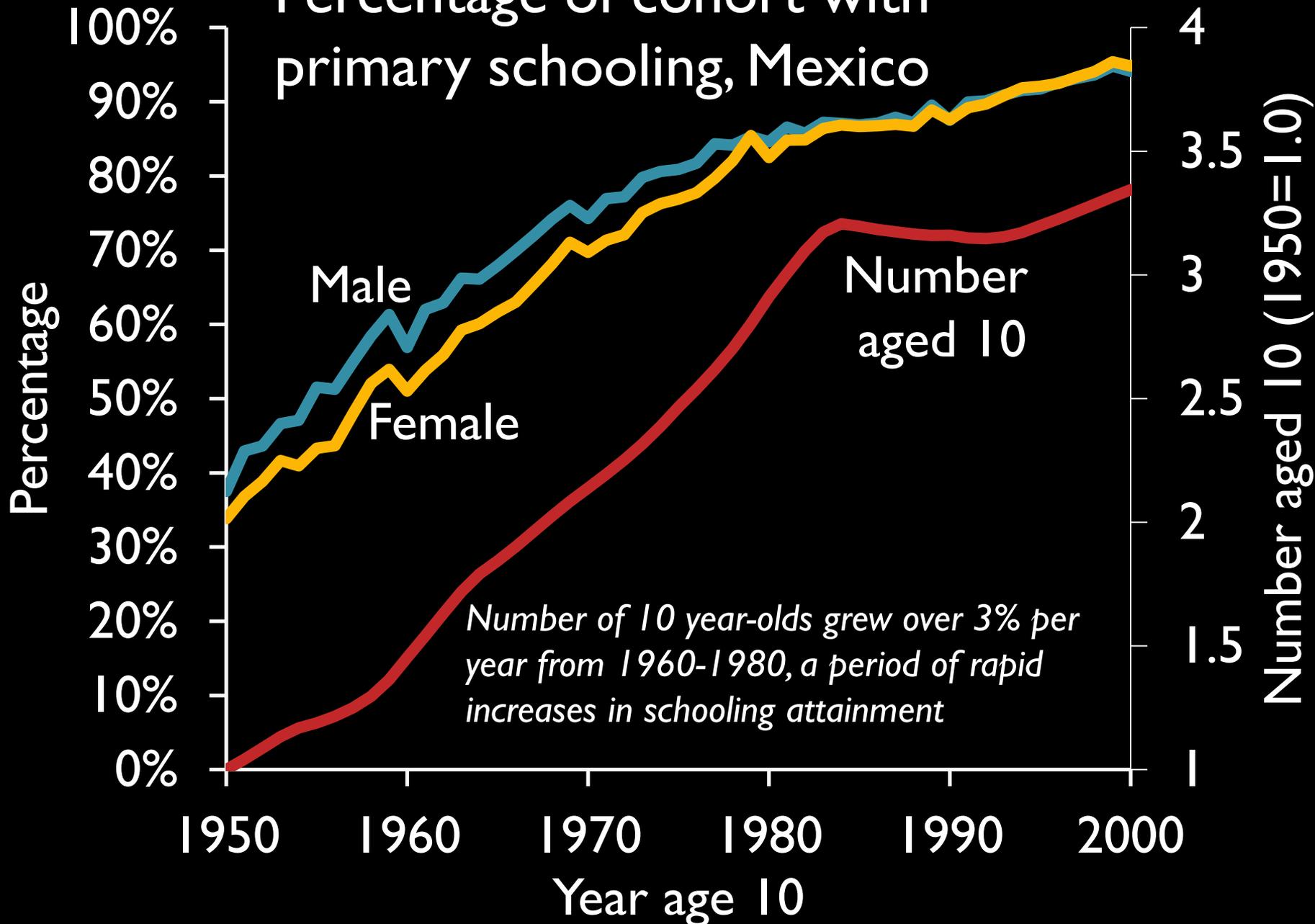
Trends in schooling

- What has happened to schooling in Mexico and Texas?
- Following slides look at schooling of cohorts
 - Percentage completing primary and secondary schooling
 - Average years of schooling completed
- Cohorts are shown in the year the cohort was age 10, roughly the time they were in school.
- Data are based on reports in 2010 Census for Mexico and US (via IPUMS-International)

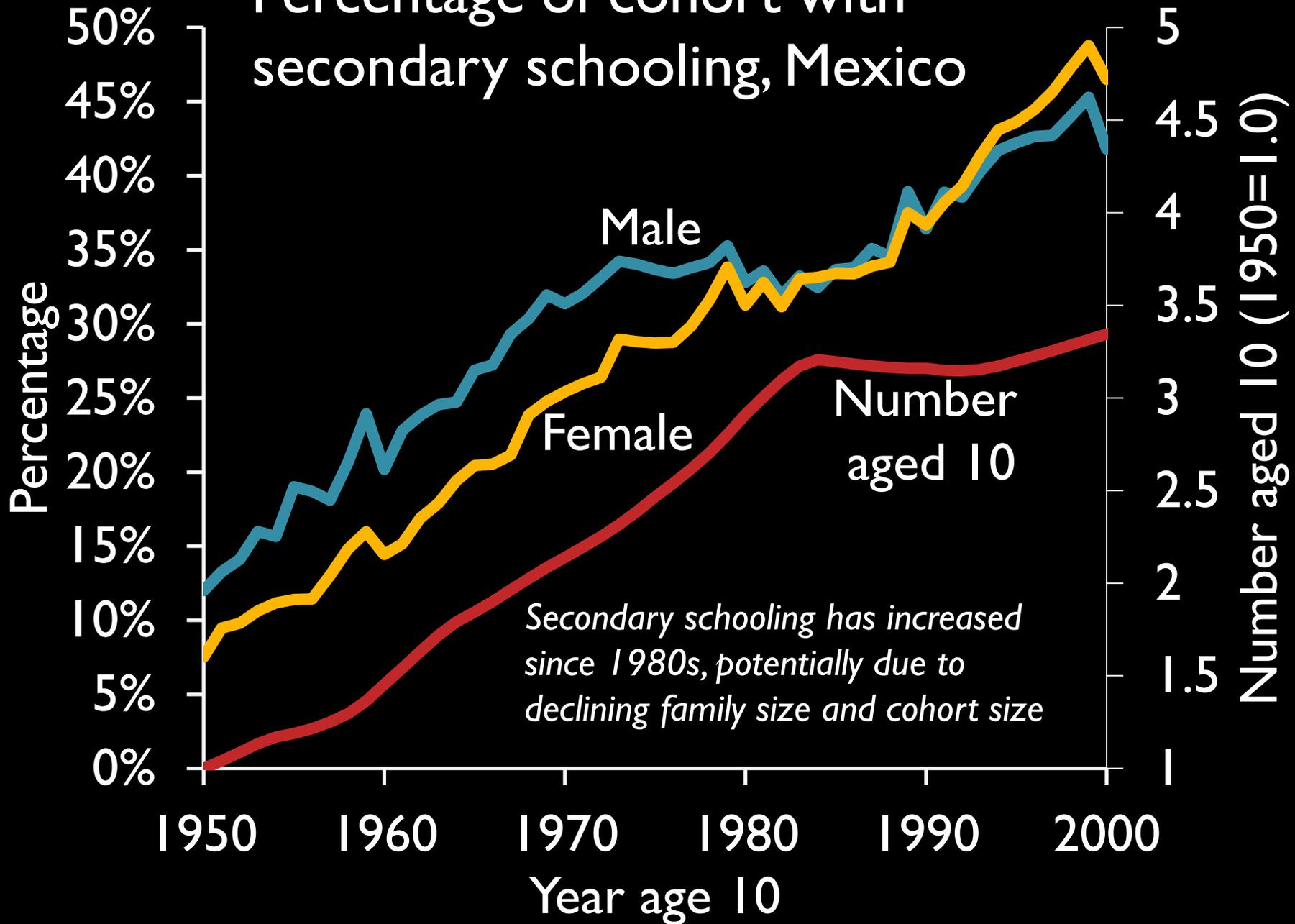
Percentage of cohort with primary schooling, Mexico



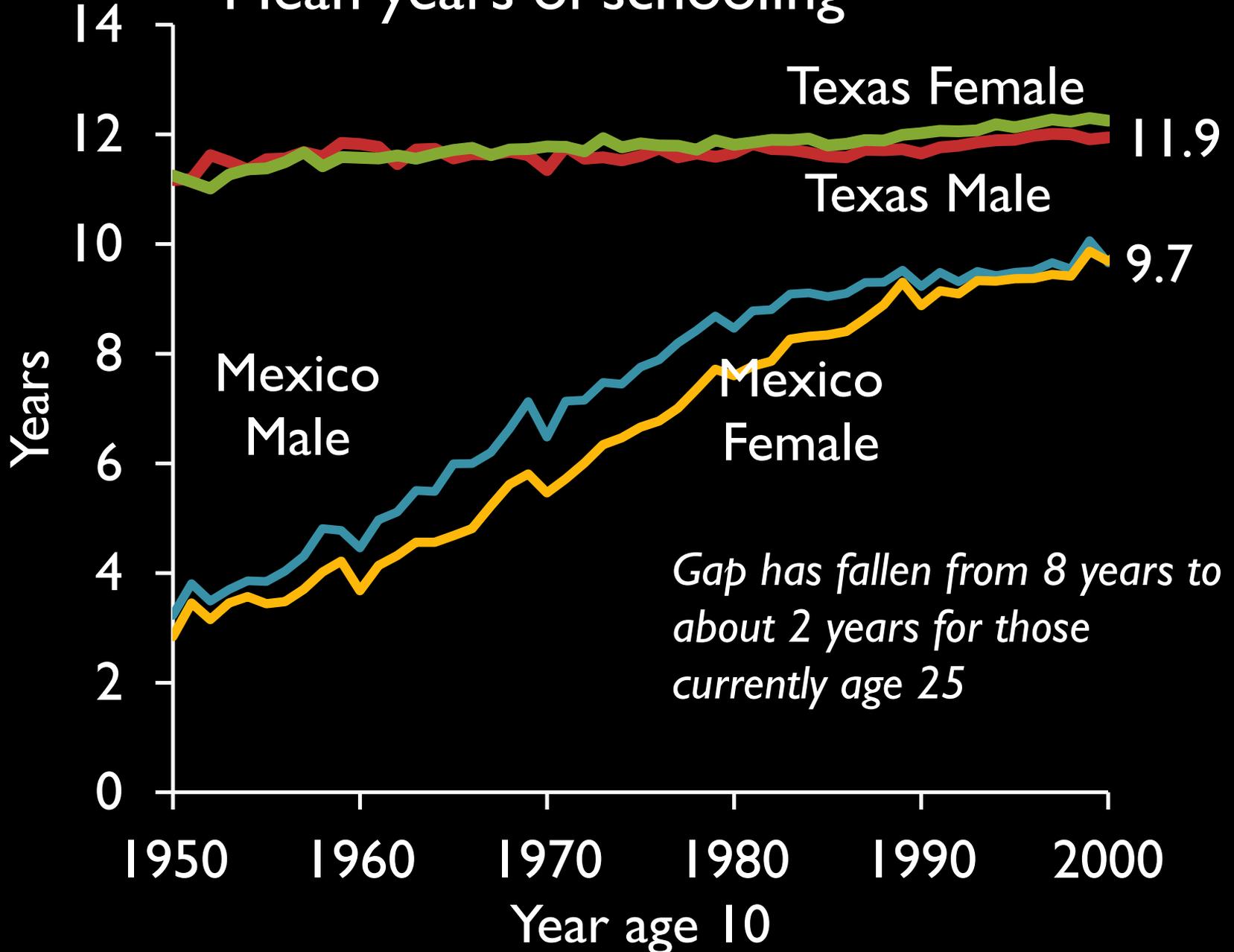
Percentage of cohort with primary schooling, Mexico



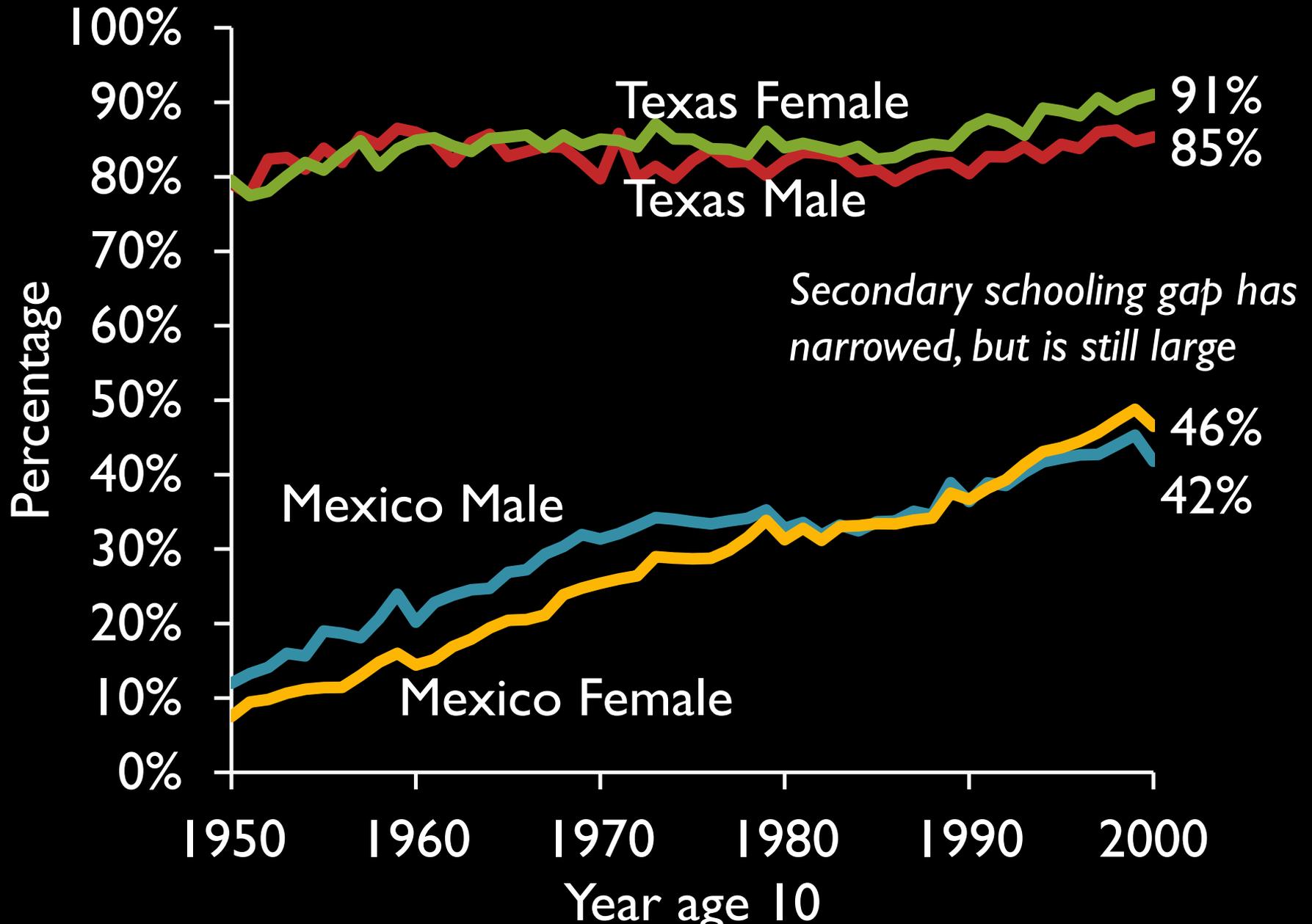
Percentage of cohort with secondary schooling, Mexico



Mean years of schooling



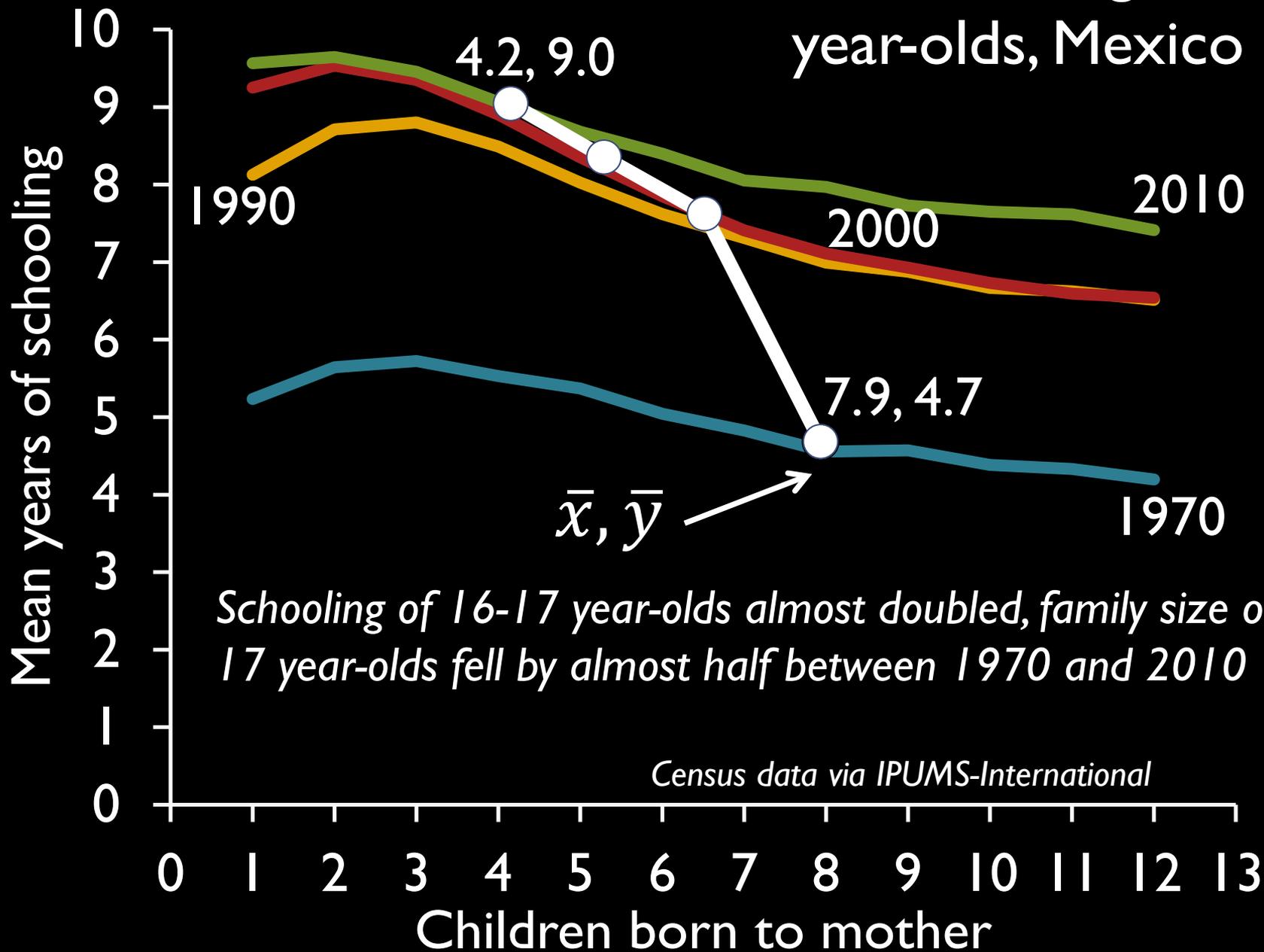
Percentage of cohort with secondary schooling



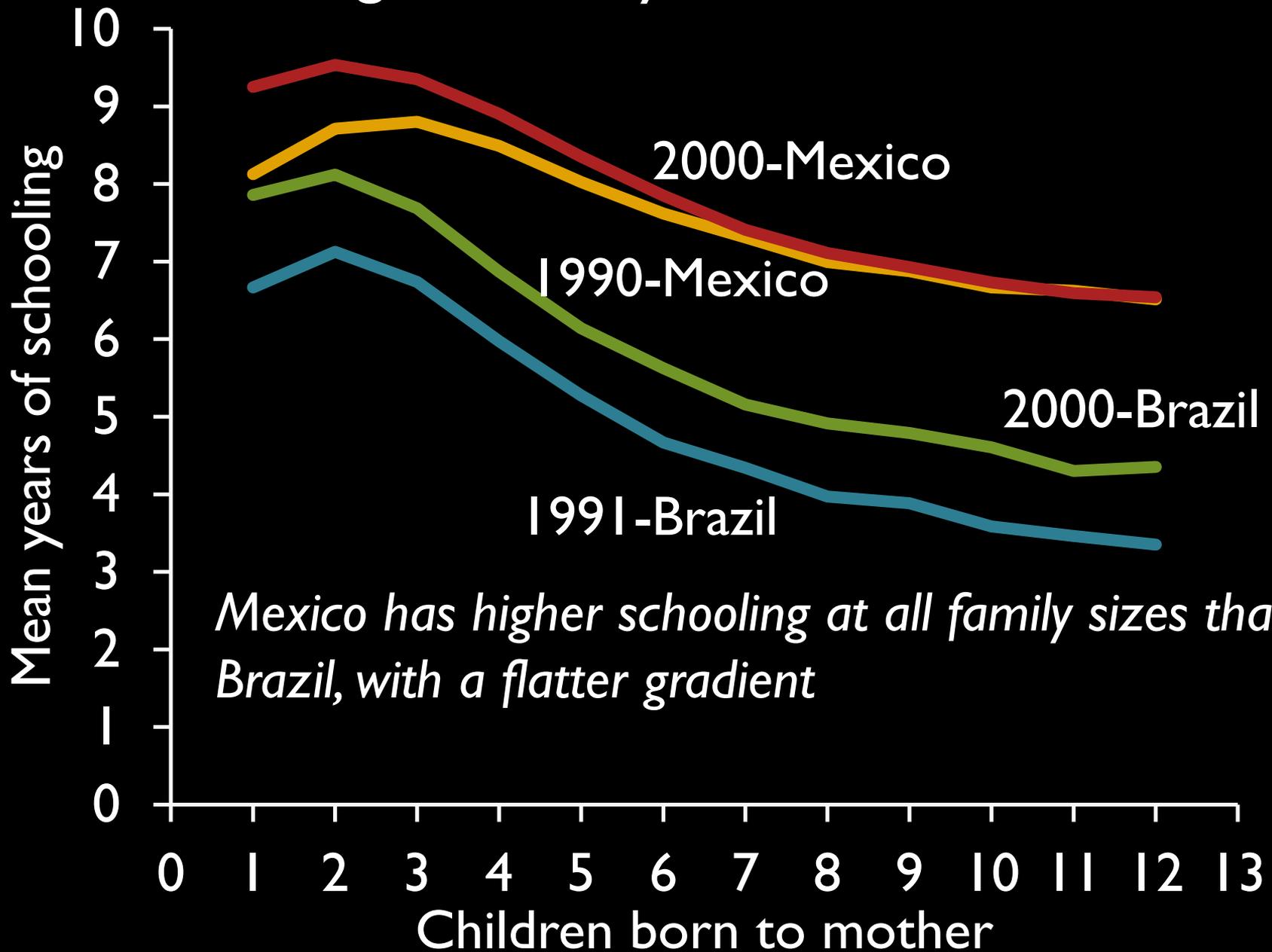
Falling family size and rising schooling

- How much of the increases in schooling in Mexico can be linked to declines in fertility?
- We have seen that schooling increased before fertility began to fall, so fertility decline cannot be responsible for those increases.
- The following graphs look at the relationship between family size and children's schooling from 1970-2010.
- Focus is on 16-17 year-olds, since most will still live with their mother, allowing me to see the number of children ever born to their mother.

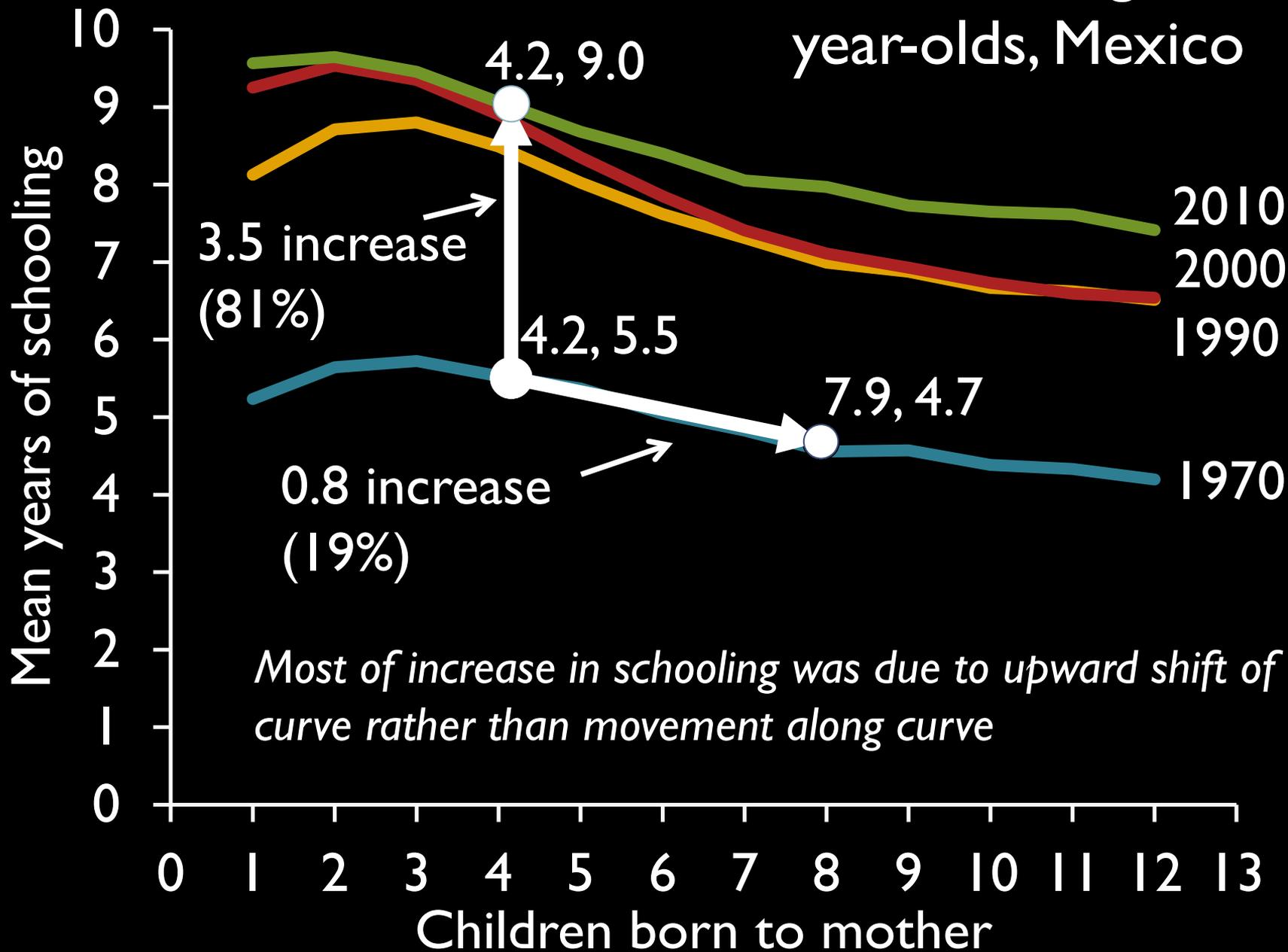
Years of schooling of 16-17 year-olds, Mexico



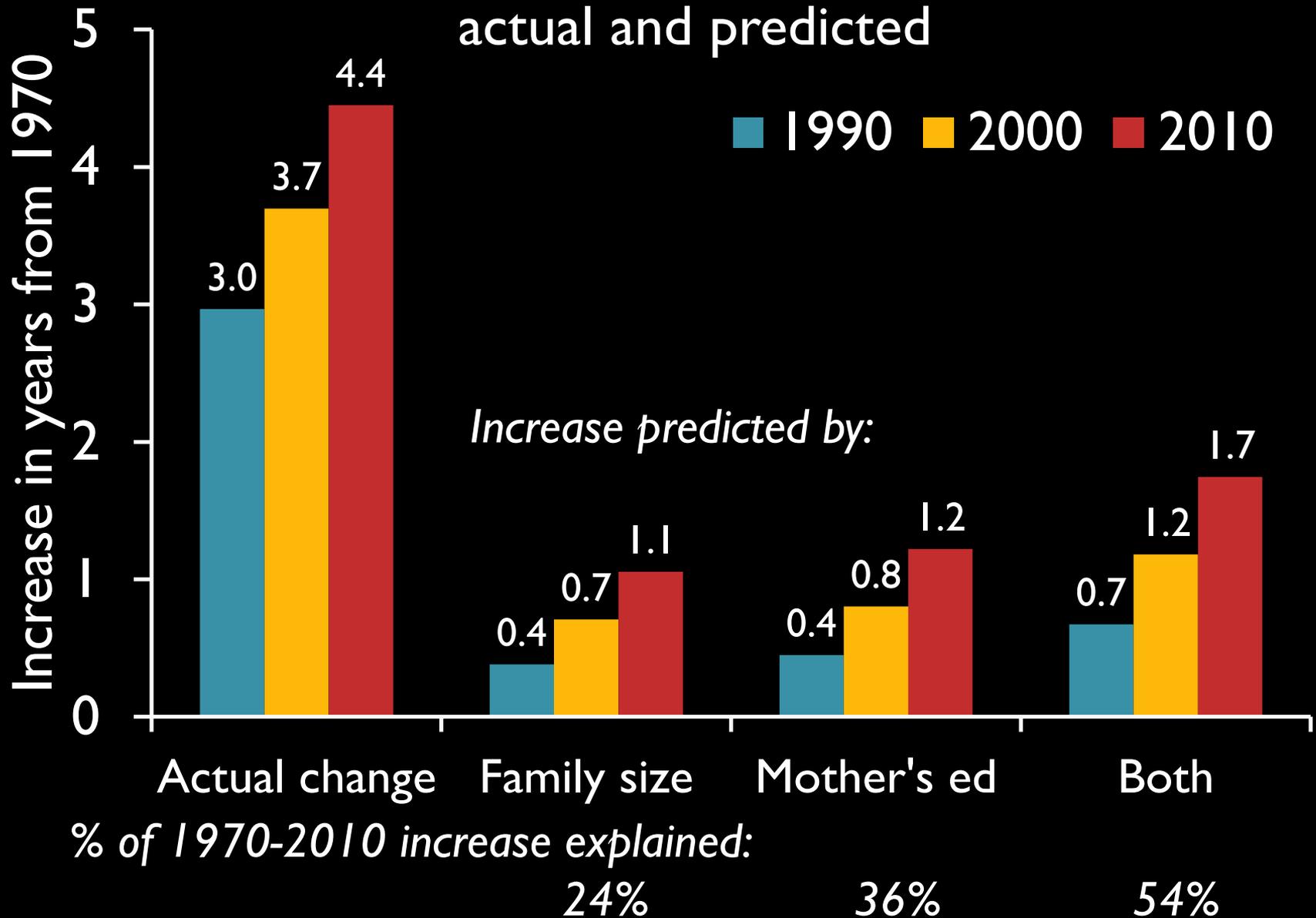
Schooling of 16-17 year-olds, Mexico and Brazil



Years of schooling of 16-17 year-olds, Mexico



Increase in schooling of 16-17 year-olds from 1970, actual and predicted



Are smaller families better educated families?

- Declining family size is one factor explaining the increase in education in Mexico.
- BUT
- Large increases in education took place before fertility declined.
- Rising education is itself important in explaining fertility decline.
 - Over 60% of declining family size can be attributed to increase in women's education, most of which occurred before the introduction of family planning programs.
- The shift toward small families with high investments in children is an important part of economic development
- But declines in family size alone probably explain only about 20% of the increase in education in Mexico between 1970 and 2010.

Implications for labor markets

- We have been through 60 years of rapid population growth in Mexico.
 - Population aged 15-44 more than tripled between 1960 and 2000, adding 35 million people
- Mexico's youth population has reached its peak and is now declining
 - This is true in most of Latin America and Asia.
- The gap in education between Mexican youth and Texas youth has narrowed.
- Dynamics of labor markets and migration will be very different in the coming decades.