Trends and Patterns in Fertility

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About us

- PAD: the Program Applied Demographics at Cornell University
  - Within the Jeb E. Brooks School of Public Policy
  - Adjacent to the Cornell Population Center (CPC)
    - Started producing TiDbits: Topics in Demography, a series of digestible briefs on population
    - 1st brief of this year covered Fertility in NYS- hot topic, garnered quite a bit of regional media attention

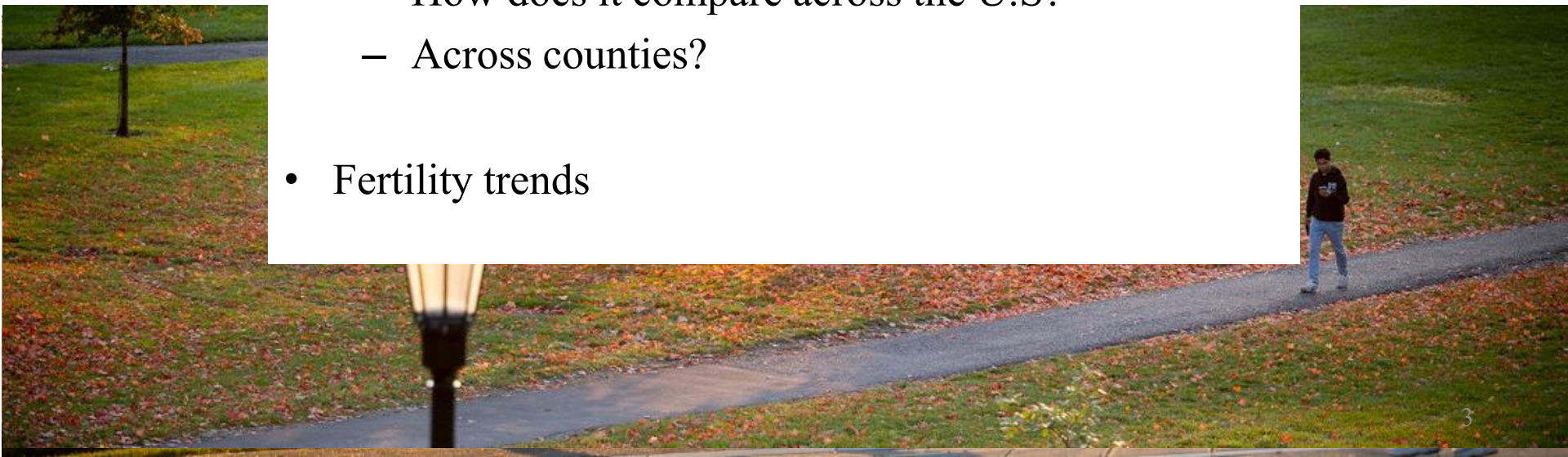
- Contract with the NYS Department of Labor:
  - Keep up with "all things Census"
  - Represent NYS in the Federal State Cooperative for Population Estimates (FSCPE)
    - Jan Vink is the chair of the FSCPE Steering Committee
  - Produce Projections for New York State and its counties
  - Evaluate, analyze, and translate population data for variety of audiences

Overview

- Definition and Measurement

- A snapshot of Fertility in NYS
  - How does it compare across the U.S?
  - Across counties?

- Fertility trends



What is Fertility?

- Addition of new population by childbirth
- Births are a vital mechanism of population change
  - Net with deaths ➡ Natural increase (component of change)

- Birth/fertility patterns can reflect broader changes (and global events such as the COVID-19 Pandemic)
- Different measurements:
  - Crude Birth Rate (CBR)[number of births per 1,000 population]
  - Total Fertility Rate (TFR) [average number of births per woman aged 15-44 given ASFRs hold]
  - Age Specific Fertility Rate (ASFR) [needed for the TFR]
  - General Fertility Rate (GFR) [births per 1,000 women 15-44]
  - Other indicators such as child to woman ratio, age at first birth, and birth intervals

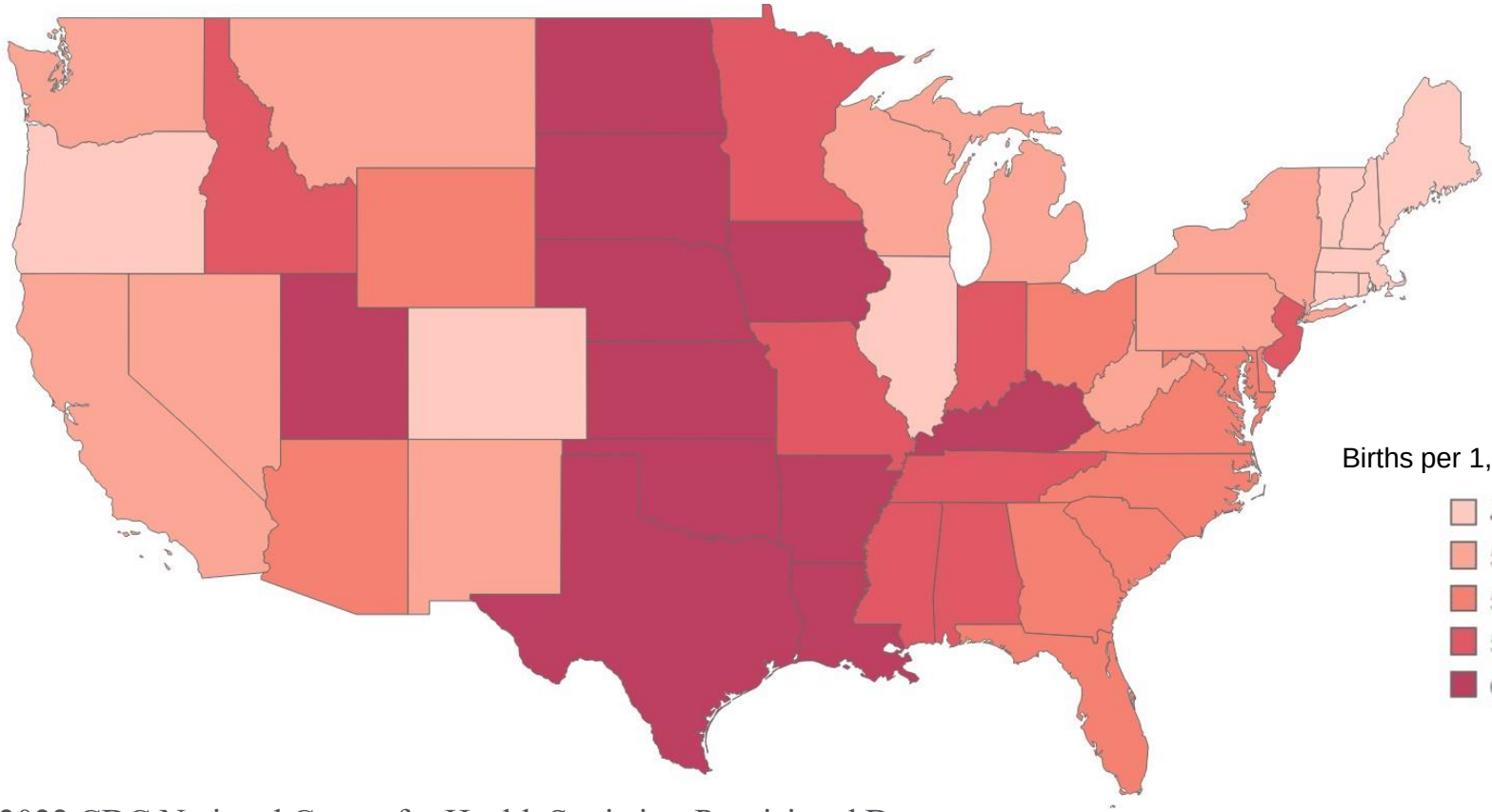
Fertility in New York State

In 2022*…

- There were 207,774 live births
  - Down slightly from 2021 (210,742 births)
- General Fertility Rate (GFR): 53.55
  - Births per 1,000 women (aged 15-44)
- Total Fertility Rate (TFR): 1.54
  - births per woman (aged 15-44)
- Average age at first birth was 28.6

*2022 CDC National Center for Health Statistics, Provisional Data

State Variation in General Fertility Rates, 2022*



*2022 CDC National Center for Health Statistics, Provisional Data

Age at First Birth: Top and Bottom 5 States, 2022*

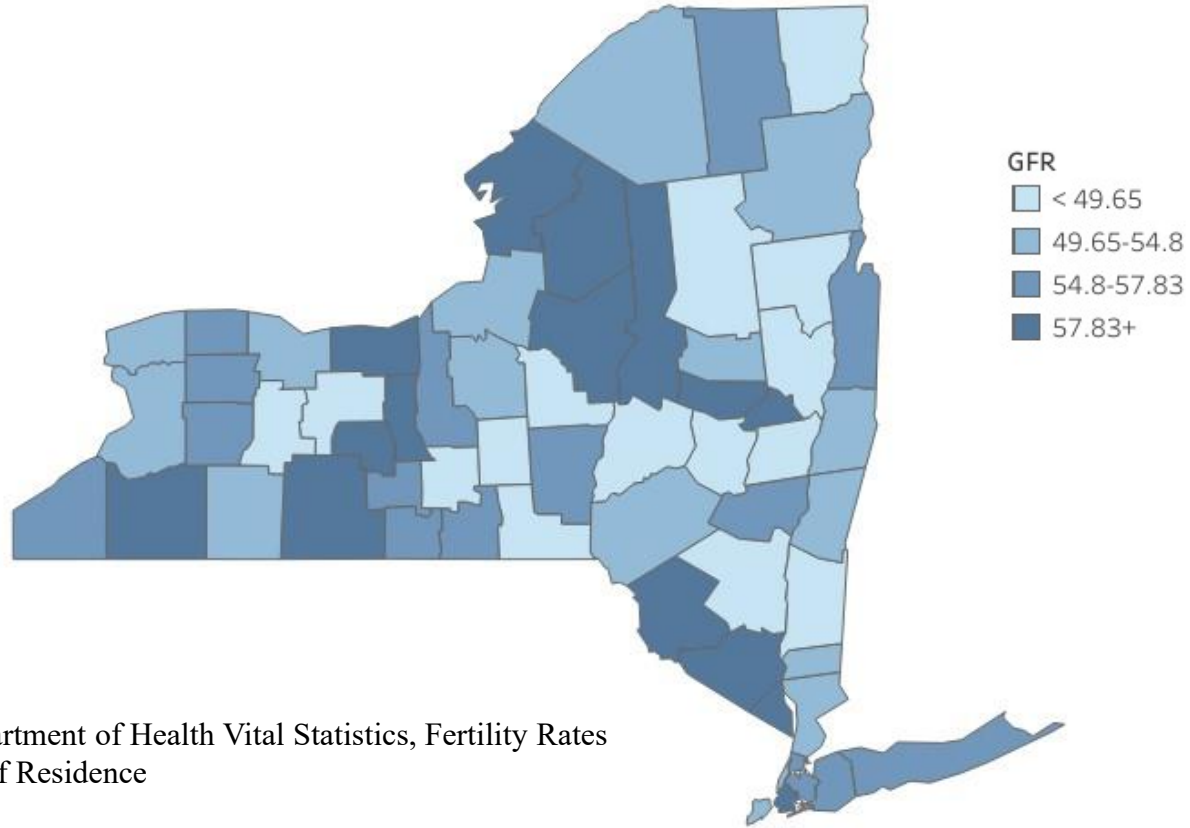
- Average age at first birth has increased slightly but relatively steadily over the past decade (not shown).
- All Northeast states have older than the U.S. average ages at first birth.
- New York has the 7th oldest average age at 28.5.

Rank	State	Average Age at First Birth
1	Mississippi	24.08
2	Arkansas	24.65
3	Louisiana	24.9
4	West Virginia	24.9
5	Oklahoma	24.96
-	United States	27.06
47	New Hampshire	28.85
48	New Jersey	28.96
49	Connecticut	28.99
50	Massachusetts	29.62
51	District of Columbia	30.28

*2022 CDC National Center for Health Statistics, Provisional Data

County Variation in GFR

General Fertility Rate (GFR) by County, 2020



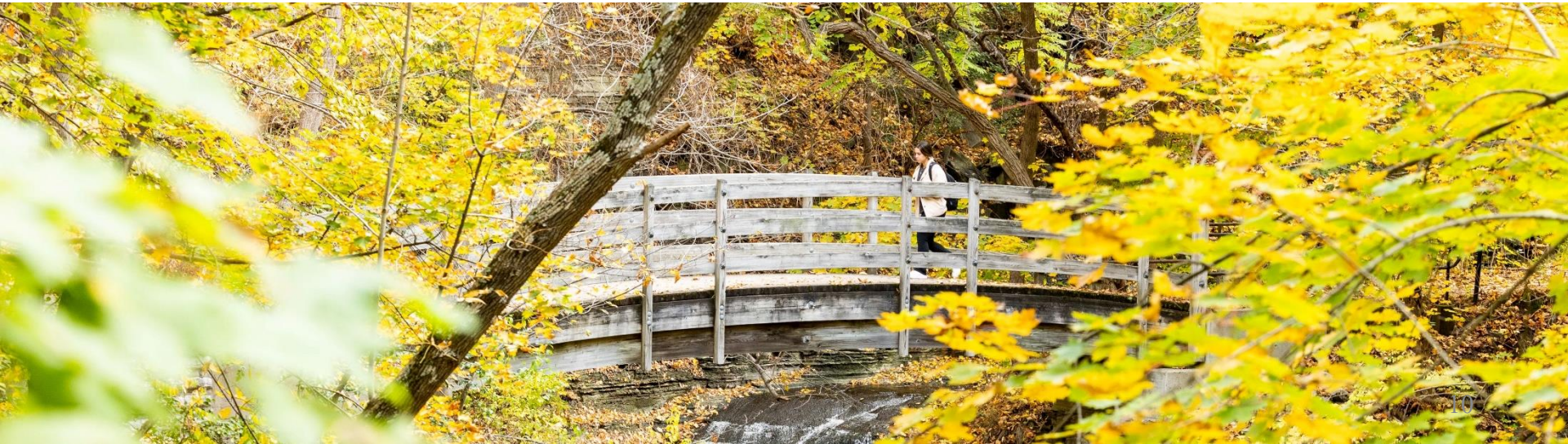
Data: 2020 NYS Department of Health Vital Statistics, Fertility Rates by Mother's County of Residence

Rank Comparisons of Fertility Metrics by County, 2020

County	Rank-GFR	GFR	Rank-TFR	TFR	Rank-CBR	CBR
Rockland	1	98	1	3.02	1	17.5
Jefferson	2	86.8	2	2.39	2	16.6
Orange	3	72.9	3	2.25	3	13.6
Yates	6	68.6	4	2.19	5	12.8
Montgomery	7	67.3	5	2.05	7	12.2
Albany	58	45.3	58	1.38	35	9.5
Madison	55	46.8	59	1.34	59	7.7
Clinton	53	48.1	60	1.34	55	8
Tompkins	62	26.4	61	1.02	61	6.6
New York	60	40.5	62	0.95	44	8.7

Data: New York State DOH Vital Statistics, Female population and births by mother's age and resident county, 2020

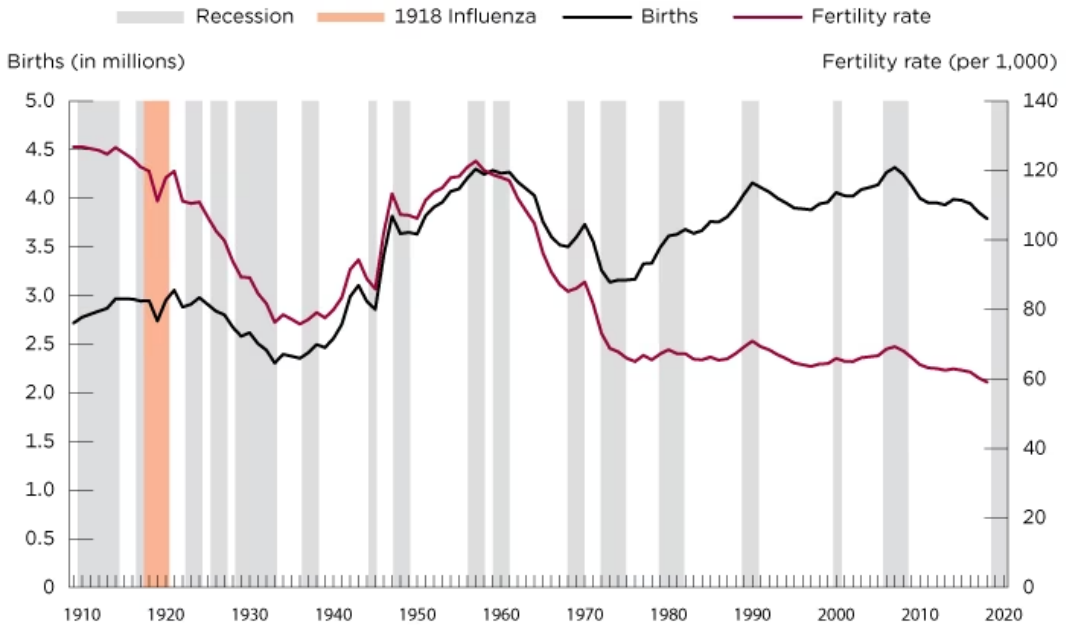
Fertility Trends



Over a Century of Change in U.S. Fertility

Figure 6.

Births, Fertility Rate and Recessions in the United States: 1910–2020



Note: The fertility rate is measured as births per 1,000 females ages 15 to 44.

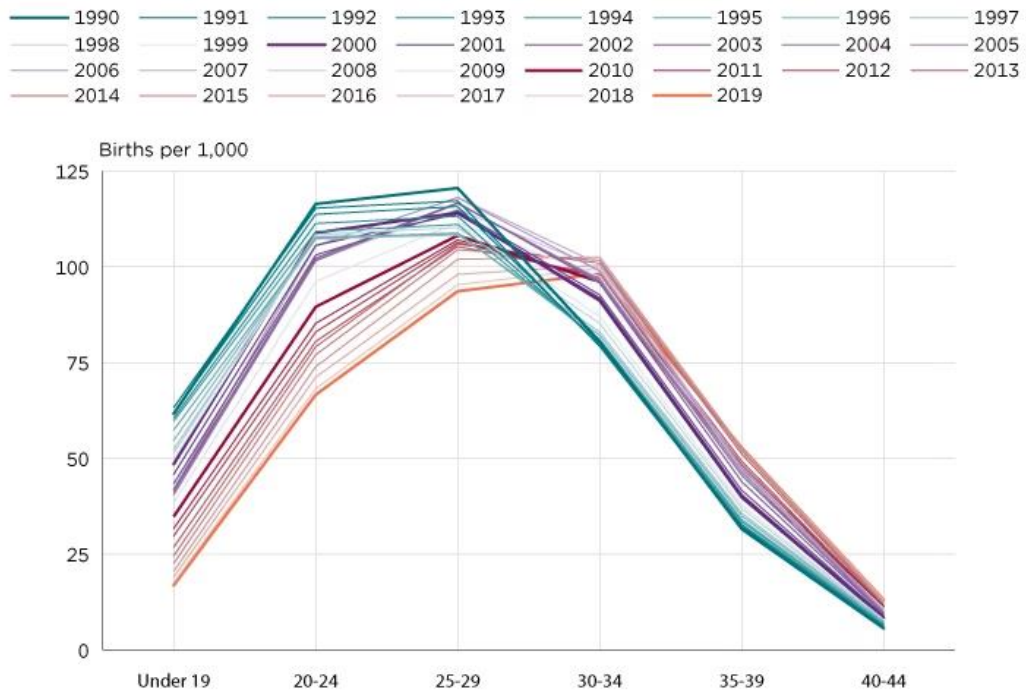
Source: National Center for Health Statistics; U.S. Census Bureau, Population Estimates; and National Bureau of Economic Research.

U.S. Fertility Rates by Age

- Patterns of age-specific fertility have shifted over the past 3 decades
- Peak fertility ages have been increasing.
- Fertility at ages 20-24 was surpassed by ages 30-34 in the early 2000s.

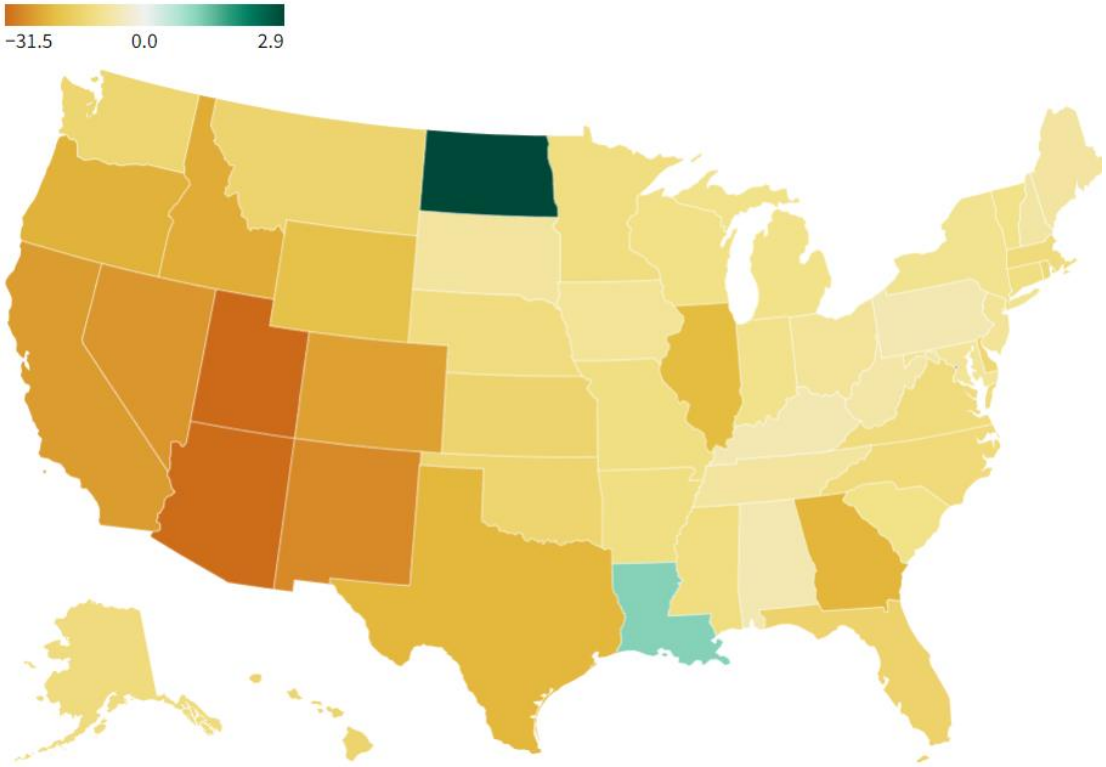
Figure 2.

Age-Specific Fertility Rates: 1990-2019



Note: Fertility rate is measured as births per 1,000 females in the age group.
Source: National Center for Health Statistics; U.S. Census Bureau, Population Estimates.

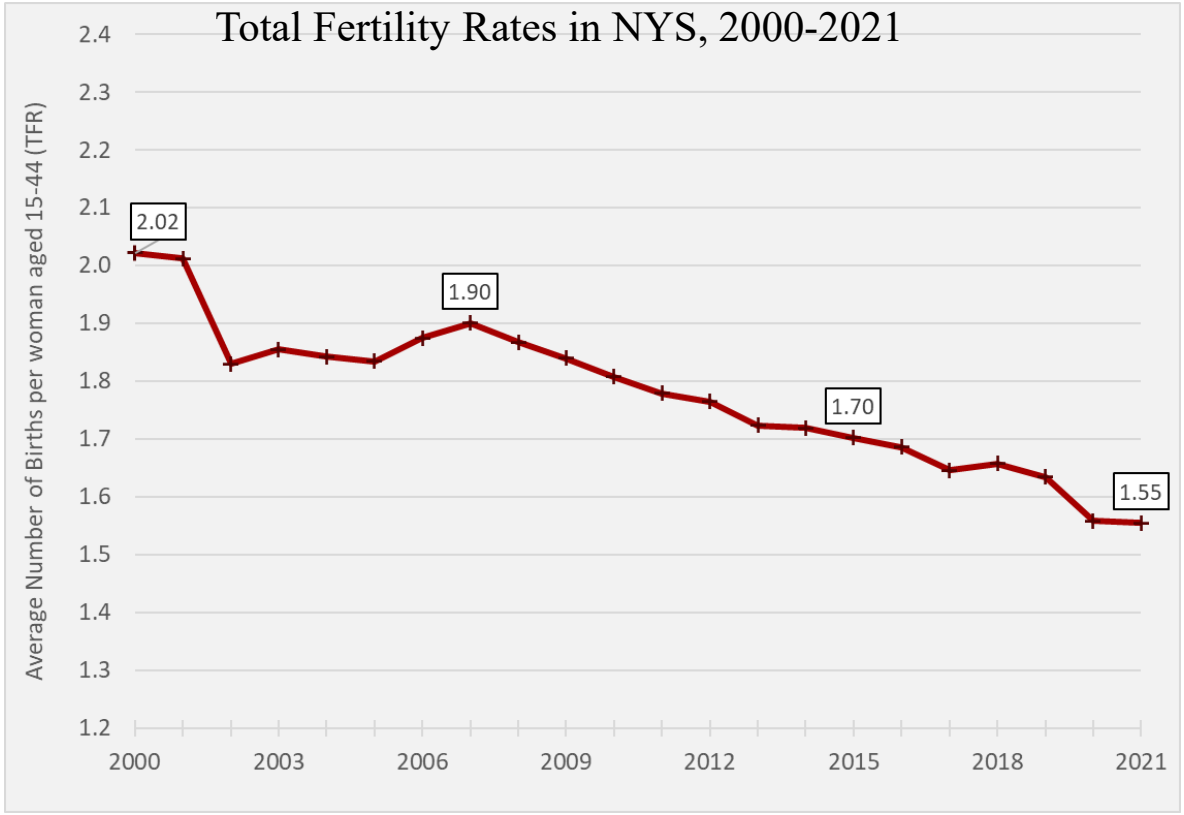
Change in GFR by State, 2005 to 2021



- North Dakota (+2.93%) and Louisiana (+1.13%) were the only states to experience fertility rate growth since 2005.
- The Southwest region had the largest fertility declines.
- Fertility rates in Utah and Arizona had the steepest decreases in GFR, -31.47% and -31.14% respectively.

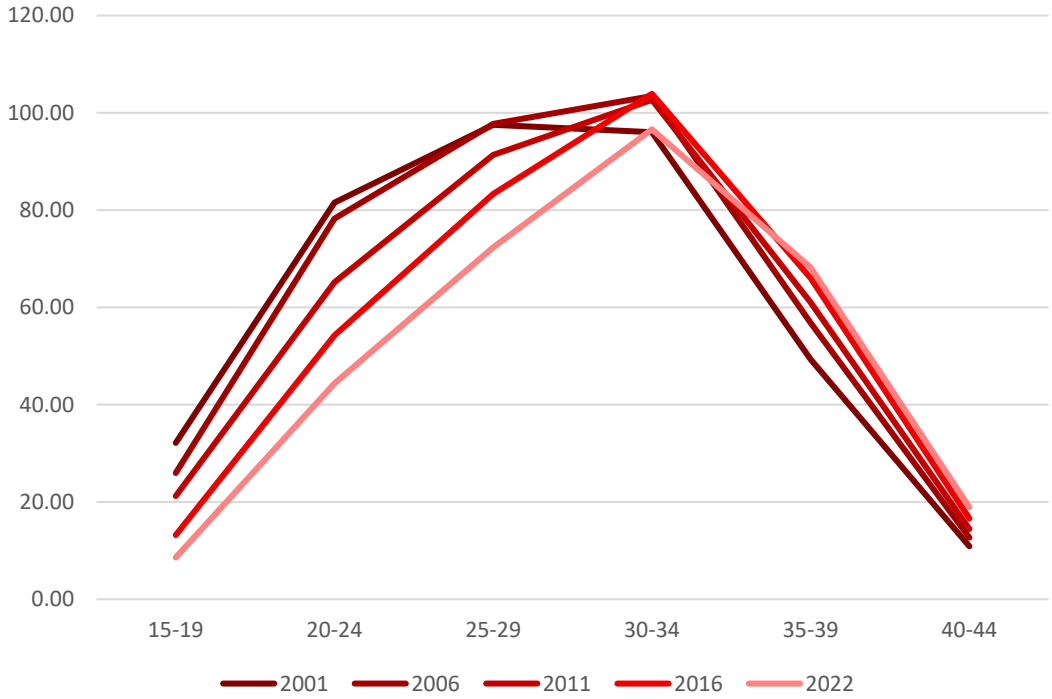
Data: CDC NCHS Natality Files, 2005 and 2021; USA Facts.org

New York State Fertility Trends



Data: 2000-2021 Natality Files, National Vital Statistics System (NVSS) of the National Center for Health Statistics (NCHS)

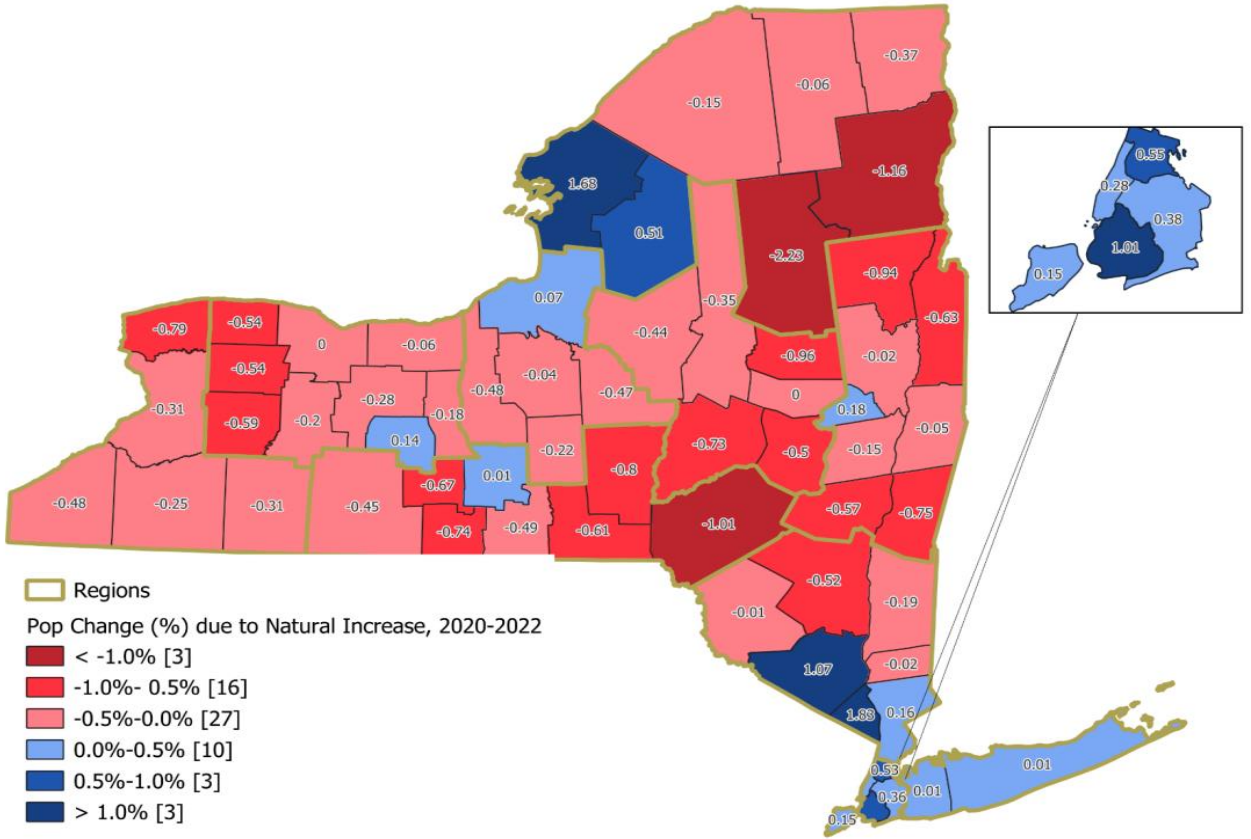
Trends in Age Specific Fertility in NYS



Age	2001	2006	2011	2016	2022
15-19	32.13	25.96	21.21	13.18	8.60
20-24	81.52	78.24	65.17	54.23	44.40
25-29	97.53	97.72	91.36	83.31	72.30
30-34	95.99	103.44	102.63	103.90	96.60
35-39	49.27	56.82	60.99	66.04	68.20
40-44	10.92	12.66	14.42	16.63	18.90

Data: 2006-2022 Natality Files, National Vital Statistics System (NVSS) of the National Center for Health Statistics (NCHS); 2001 NYS Health Department Vital Statistics

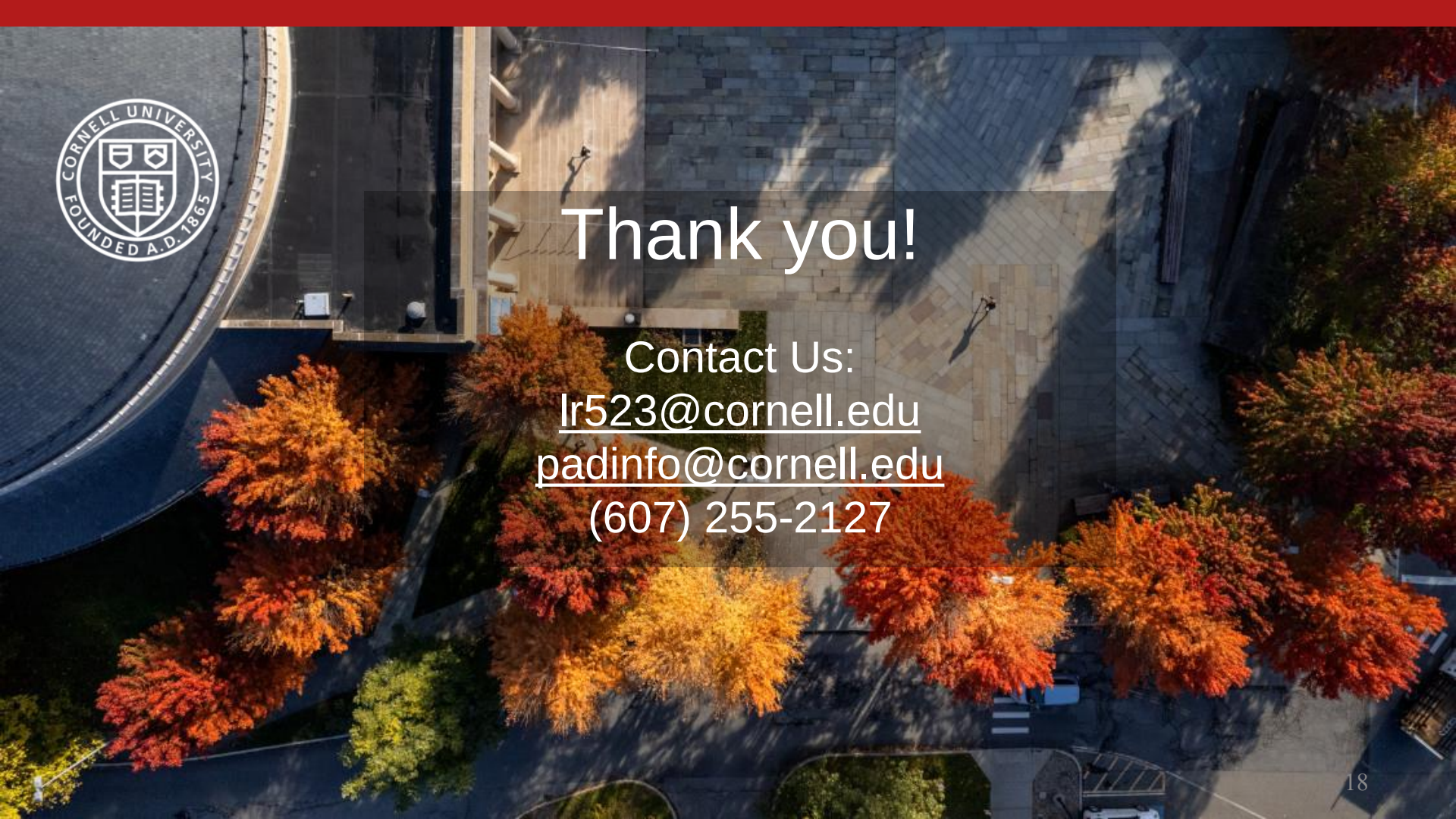
Recent Changes in Natural Increase, 2020 to 2022



Data: U.S. Census Bureau Vintage 2022 County Population Estimates

Final Takeaways

- Fewer births overall
  - Depends on area
- Births are happening at older ages
  - In NYS and overall
- Fertility hovers around the nation trends (and vice versa) but there are tails (and outliers).
- NYS has an older average age at first birth and older ASFR distributions than the U.S. overall
- Measurement matters: GFR≠ TFR ≠ CBR



Thank you!

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