Population Growth and Redistribution

\[ p^* = (b^* - d^*) + (i^* - m^*) \]

where \( b^* \) is the birthrate
\( d^* \) is the deathrate
\( i^* \) is the immigration rate
\( m^* \) is the migration rate

We'll say a little about each (except \( m^* \))
I. Birth

The birthrate has been falling from as far back as we have records: rate falls by half in 19th c. why? Key to most explanations is access to land (in cities, on farms) -> bequest model of fertility
Evidence? Problems?
Child-Woman Ratio and Stage of Settlement for Five Settlement Classes and Six States, 1860

Five Settlement Classes

- Total own children per farm wife 30-39
- Own children 0-9 per farm wife 30-39
- Six States
- Children 0-9 per farm woman 20-44
- Children 0-9 per woman 16-44

Percentage of 1860 improved acreage to maximum ever improved

Per thousand
II. Death

How to explain the pattern?

Better medical care?
Better medical knowledge?
Reduced disease virulence?
Improvements in hygiene?
Better sanitation?

All these were offered as explanations for declining crude death rates (deaths/pop.) From 1700 through 1700

1700 40 per thousand
1850 23
1900 17

Problems: the cohort data show a different story; none of these explanations has support
The Antebellum Paradox

Possible explanations for rising mortality (declining life expectancy) at age 10) even as GNP was rising

1. urban disamenities
2. greater market integration

Diseases
Choices

3. greater inequality

Evidence: height
III. Immigration

Sources
Rates
Reasons

The patterns of immigrant adjustment

1. settlement

Figure 1-5. Percentage of 1840–50 arrivals at New York located in New York by years since arrival in the U.S. and origin. Note. See text for estimating procedures. Source. 1840–50 immigrants linked from passenger ship lists to 1850 and 1860 census manuscript schedules.

2. occupational attainment
3. wealth accumulation
Figure 1-6. Distribution of immigrants by state (1850). Source. 1840-50 immigrants linked from passenger ship lists to 1850 census manuscript schedules.
Figure 1-7. Probability of attaining an occupation other than “unskilled” by time since arrival. Note. Assuming a Weibull hazard function.
Figure 1-8. Estimated real estate wealth by age for natives and immigrants, 1850 and 1860.