

FIRST THEMATIC SESSION: POPULATION DYNAMICS AND SUSTAINABLE DEVELOPMENT

FAST POPULATION CHANGE

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Outline

- Overview
- Development and Fertility
- Slow and Fast Population Dynamics

Overview

- Low fertility (1.8 below replacement in 49/56 countries)
- Population ageing (15% 65+ in 2015)
- Increasing life expectancy (75 M, 81 W in 2015)
- Significant out-migration (East) and in-migration (West)
- 20/56 countries projected with population decline by 2030

Fertility

- **Q: Where do families have more kids?**
- Brazil vs. USA
- Iran vs. Australia
- Albania vs. Sweden
- Sicily vs. Lombardy

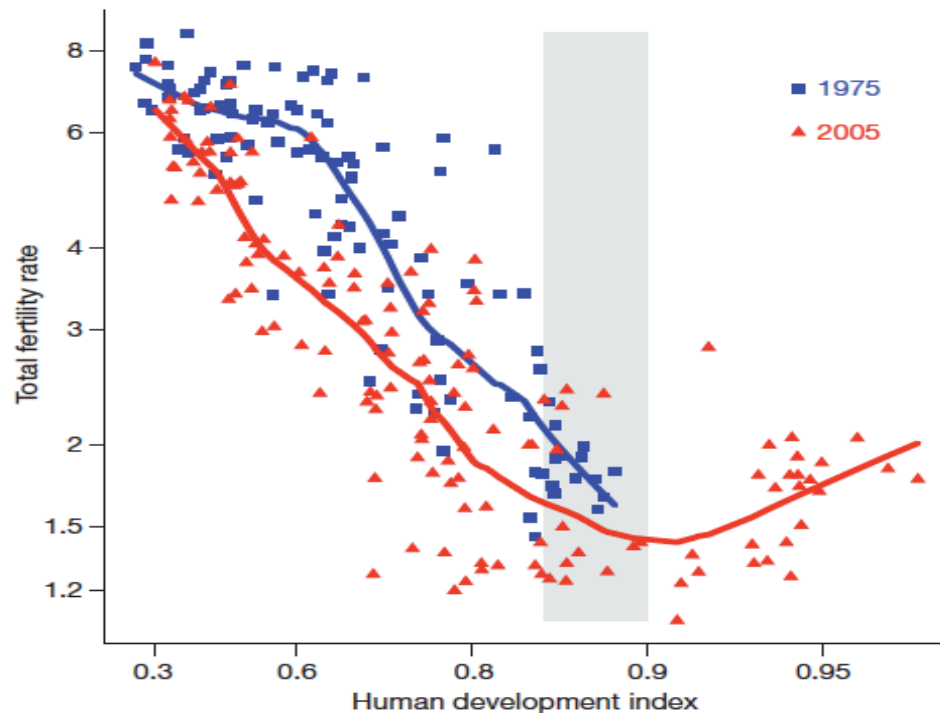
Fertility

- **A: Where do families have more kids?**
- Brazil (1.82) vs. **USA (1.89)**
- Iran (1.75) vs. **Australia (1.92)**
- Albania(1.78) vs. **Sweden (1.92)**
- Sicily (1.36) vs. **Lombardy (1.48)**

Fertility


- Now, let us look at the answers only ten years earlier
- **Brazil (2.25)** vs. USA (2.04)
- **Iran (1.97)** vs. Australia (1.77)
- **Albania(1.95)** vs. Sweden (1.67)
- **Sicily(1.42)** vs. Lombardy (1.27)

Total Fertility Rate and Human Development Index

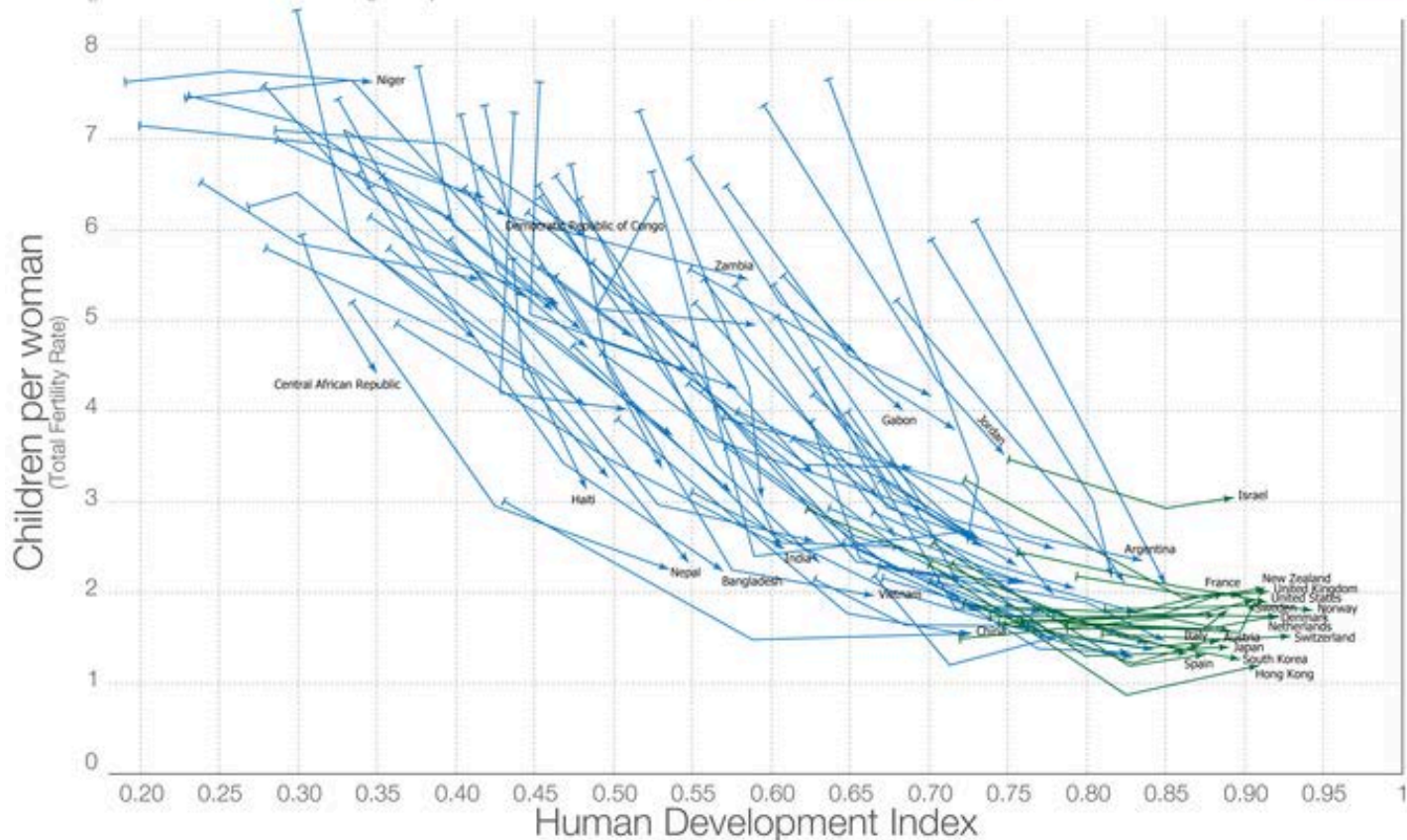


Source: Myrskylä, Kohler, Billari, *Nature*, 2009

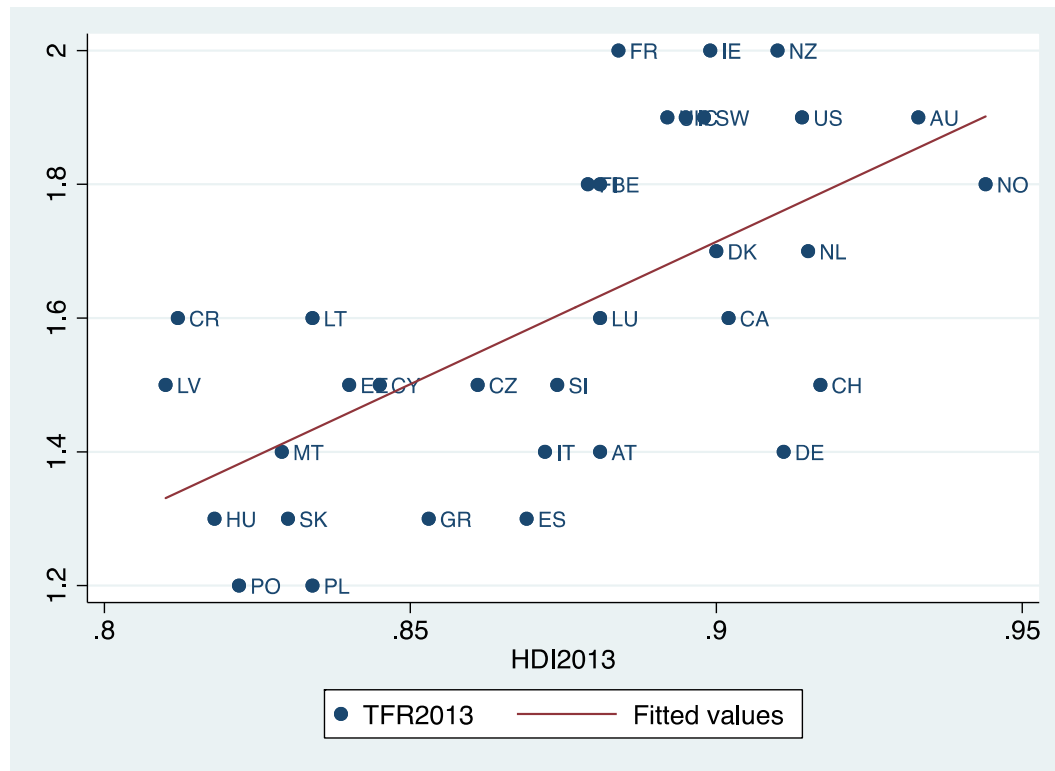
The relationship between Fertility and HDI through time (1980, 2000 and 2014)

The Human Development Index measures human development by combining indicators of a country's health conditions, living standard and education level (weighted equally). Each arrow shows the level of fertility and HDI for one country in 1980, 2000, and 2014 like this: . Shown in green are countries with an HDI > 0.85 in 2014.

OurWorld
in Data

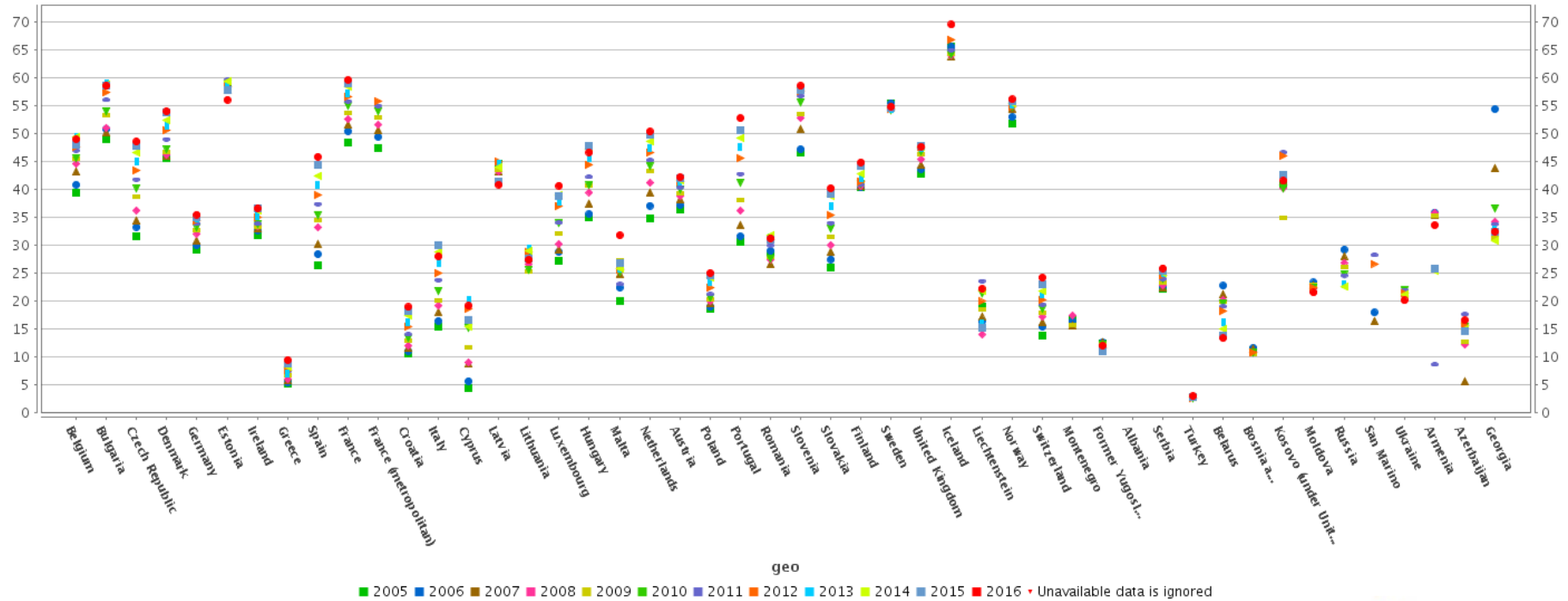


Total Fertility Rate and Human Development Index (2013)



Sources:
Human
Fertility
Databas
e and
UNDP

Share of live births outside marriage % of total live births



Slow and Fast Population Dynamics

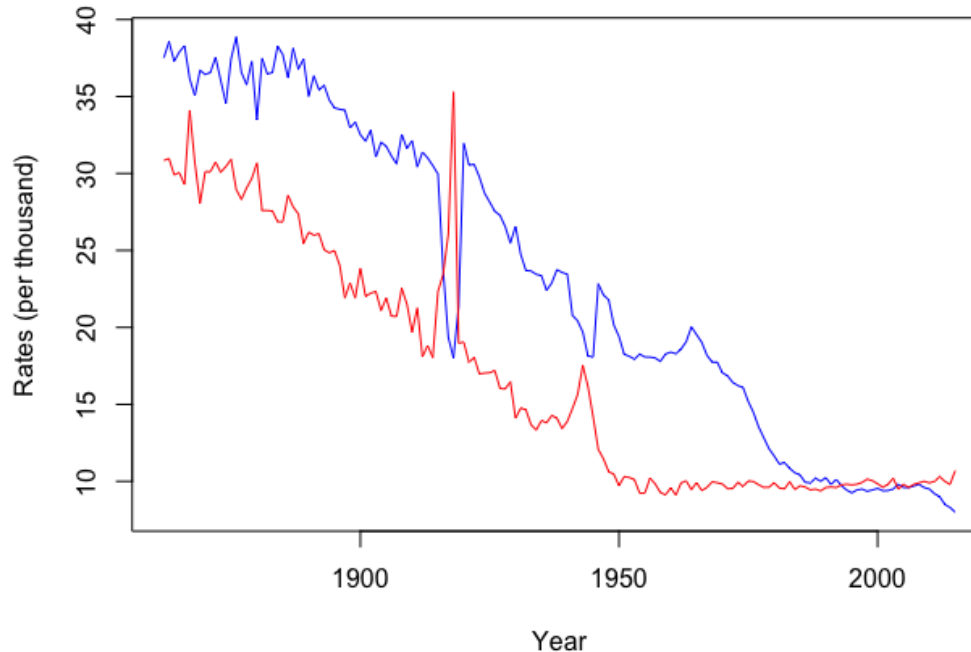
- A simple measure of the speed of population change (Goldstein, 2015) is the

$$\textit{turnover} = \textit{birth rate} + \textit{death rate}$$

- As the demographic transition comes to an end, turnover should be at low levels → slow demographic change

Slow and Fast Population Dynamics

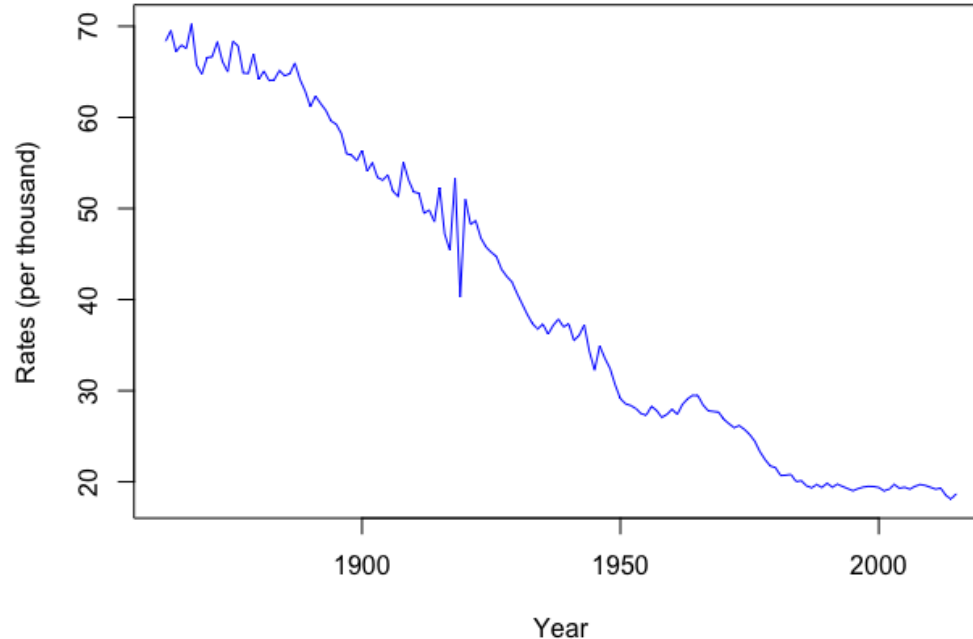
Italy, 1862-2015. Blue=birth rate, Red=death rates



Source:
ISTAT

Slow and Fast Population Dynamics

Italy. Turnover, 1862-2015



Source:
ISTAT

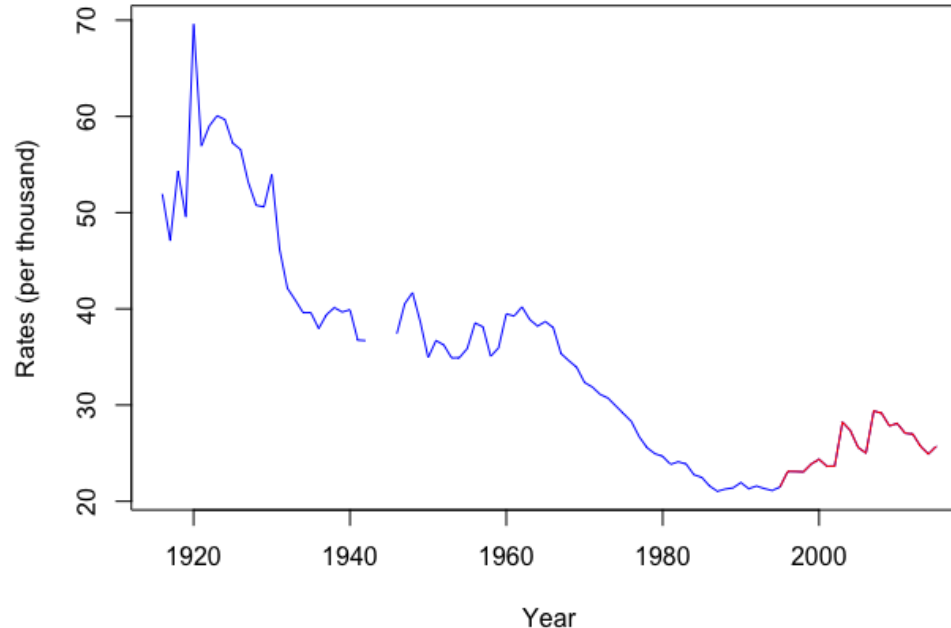
Slow and Fast Population Dynamics

- However, in the era of low fertility and mortality, international migration may play a big role in shaping the speed of demographic change

*total turnover = birth rate + death rate
+ immigration rate + outmigration rate*

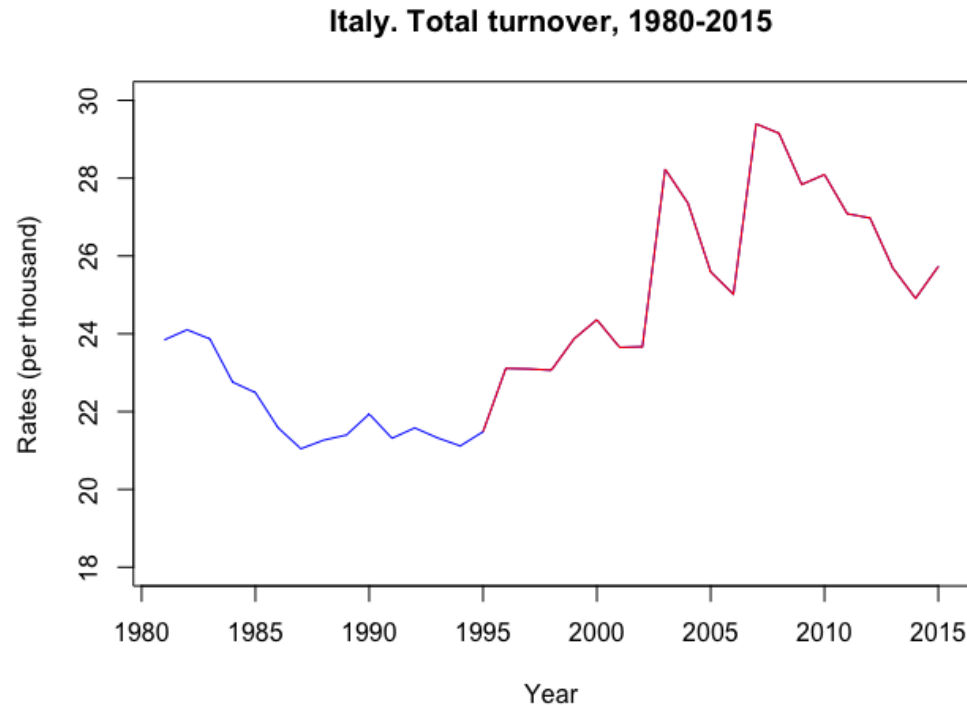
Slow and Fast Population Dynamics

Italy. Total turnover, 1916-2015



Source:
ISTAT

Slow and Fast Population Dynamics



Source:
ISTAT

Slow and Fast Population Dynamics



Source:
DESTATIS

Fast Population Change

- 2013 Chair's Summary: need to take a long-term, holistic, rights-based approach to population dynamics and its linkages with sustainable development
- In the era of low fertility and low mortality, fast change happens, e.g.,
 - through changes in the relationship between the fertility and development (economics, policies, culture, ...), across place and time
 - through the renewed role of immigration and outmigration

Fast Population Change

- Fundamental role for continuous monitoring and ‘nowcasting’ of indicators
- Potential for fast change in the coming years, at the national and subnational level

Fast Population Change

- UNECE area needs, but also has the opportunity, to innovate (policy, business, ..) in 'uncharted' territory
- Work-family, gender
- Population ageing, youth
- Migration, depopulation and migrant integration

Thank you!

