

# Returns to education

HS 156 Economics of Health & Education

# Demand for education

- Private demand
  - Satisfied demand (enrolled & stays in institution for the period enrolled)
  - Unsatisfied demand (does not get enrolled)
  - Partially satisfied demand (if drops out)
- Price of education (cost)
  - Direct costs (fees, other expenses such as travel, food, pvt tuition fees)
  - Indirect costs (opportunity cost, other out of pocket expenditures)

# Determinants of private demand for education

Demand for education has inverse relation with price/cost

Demand for education has positive relation with income

## **Individual factors:**

- Family size
- Income
- Gender
- Other household expenses
- Parents education level
- Occupation of parents
- Urban living standards (child labour?)
- Aspiration levels
- Importance of child wellbeing in the family

## **Social factors:**

- Distance from home
- Availability of schools/colleges
- Medium of instruction
- Public/pvt schools/colleges
- Infrastructure available
- Social value attached to education
- Waiting time for employment

# Social demand for education

- The social demand approach treats education as a service demanded by the community (just like any other good and service).
- It regards educational planning as the process of forecasting demand to establish adequate institutional arrangement to meet the demand.
- While the private demand is defined as the enrolment in an educational system, the social demand is defined as the aggregate of individual demand (i.e. the total number of persons enrolled in an educational system).
- While the private demand for education is estimated by the data collected at the household level, the social demand for education is determined by taking the aggregate data at a state or the country level.

Is education a private good or public good?

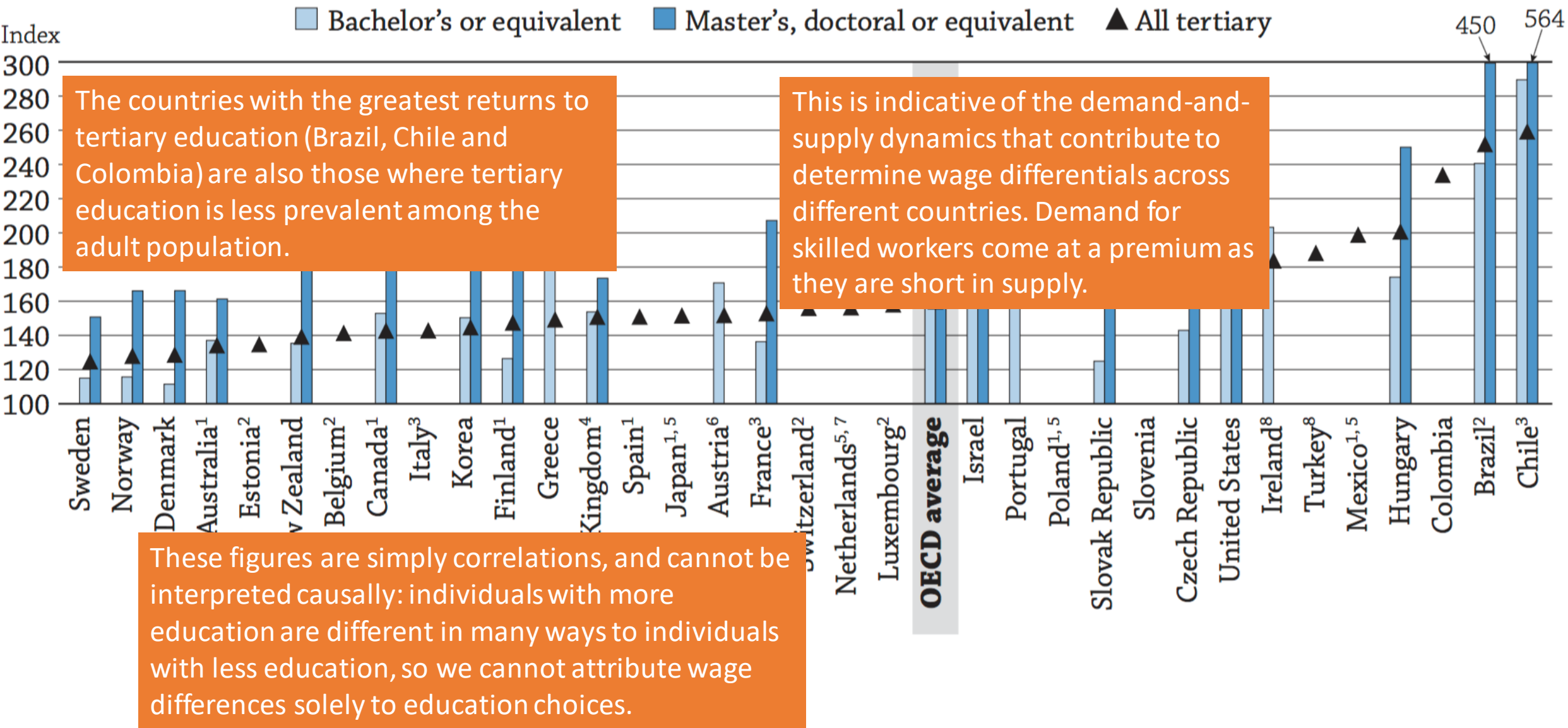
Is education a consumption good or investment good?

Is education a local good or global good?

Are benefits derived of education good commensurate with the costs incurred on it (them)?

- Education is a valuable investment, both individually and collectively.
- The most common way to measure the private returns to education, is to study how attainment improves individual labor market outcomes – usually by attempting to measure the effect of education on wages.
- Regarding social returns, the most common approach is to measure the effect of education on pro-social behaviour (e.g. volunteering, political participation, interpersonal trust) and economic growth.

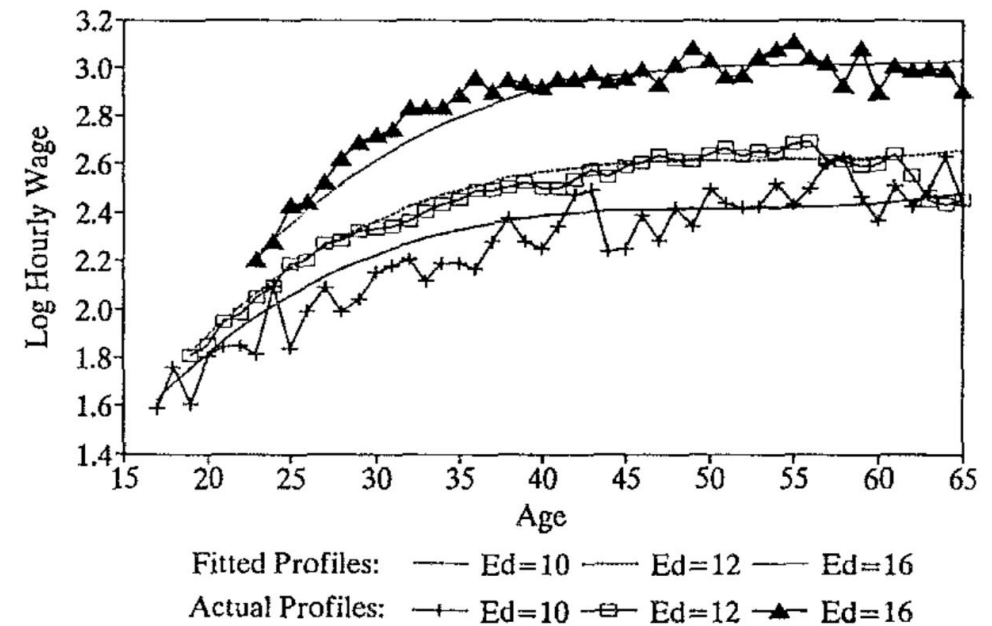
# Private returns to education



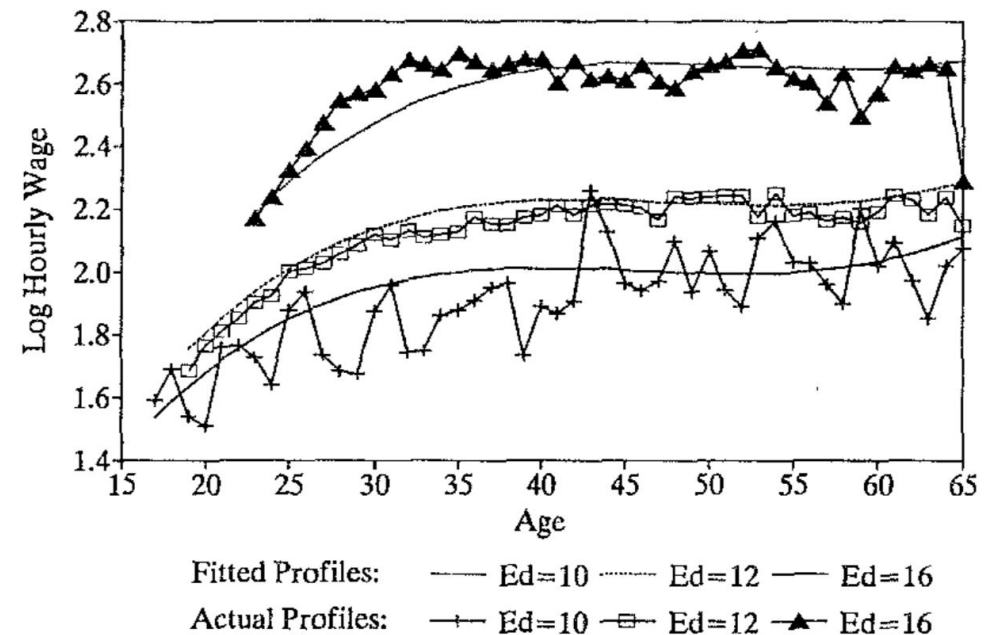
IS there a causal effect of education in earnings?

- The visualization, from Card (1999), attempts to pin down the relationship between education and earnings, by comparing wages across education levels, genders and age groups.
- The data used for this figure comes from the March Current Population Surveys in the US.
- Education levels correspond to individuals with 10, 12 and 16 years of education.
- The marks show averages for each corresponding group, and the smooth lines show the predictions made by a simple econometric model explaining wages by education and experience.

a. Hourly Wage Profiles for Men



b. Hourly Wage Profiles for Women



# Conclusion from previous slide

- For both genders, at any given age, individuals with more education receive higher wages.
- The incremental benefit from additional education grows with experience: the differences in wages between people with varying degrees of education become larger as they advance in their careers.
- In other words, education pay-offs are not constant over the life cycle.



Countries with higher educational attainment in the past are more likely to have democratic political regimes today

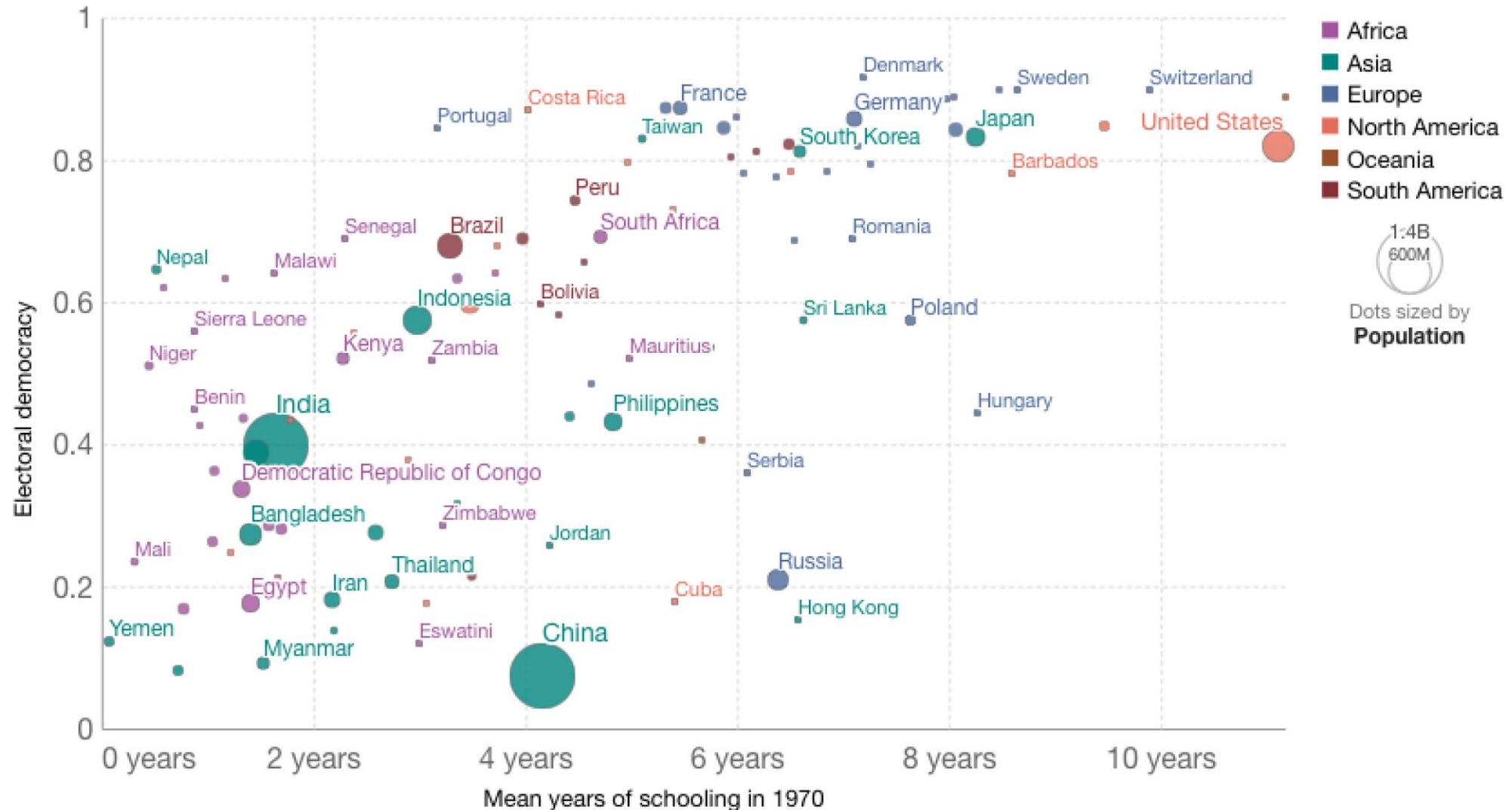
A long-standing theory in political science stipulates that a country's level of education attainment is a key determinant of the emergence and sustainability of democratic political institutions, both because it promotes political participation at the individual level, and because it fosters a collective sense of civic duty.

Under this hypothesis, therefore, we should expect that education levels in a country correlate positively with measures of democratisation in subsequent years.

Countries where adults had a higher average education level in 1970, also have more democratic political regimes today

# Electoral democracy today vs. past average years of schooling

Electoral democracy based on the expert assessments and index by V-Dem, ranging from 0 to 1 (most democratic).  
Average number of years population aged 15-64 participated in formal education.



Source: OWID based on V-Dem (v13); Lee and Lee (2016)

OurWorldInData.org/democracy • CC BY

Note: Formal education is primary/ISCED 1 or higher. This does not include years spent repeating grades.

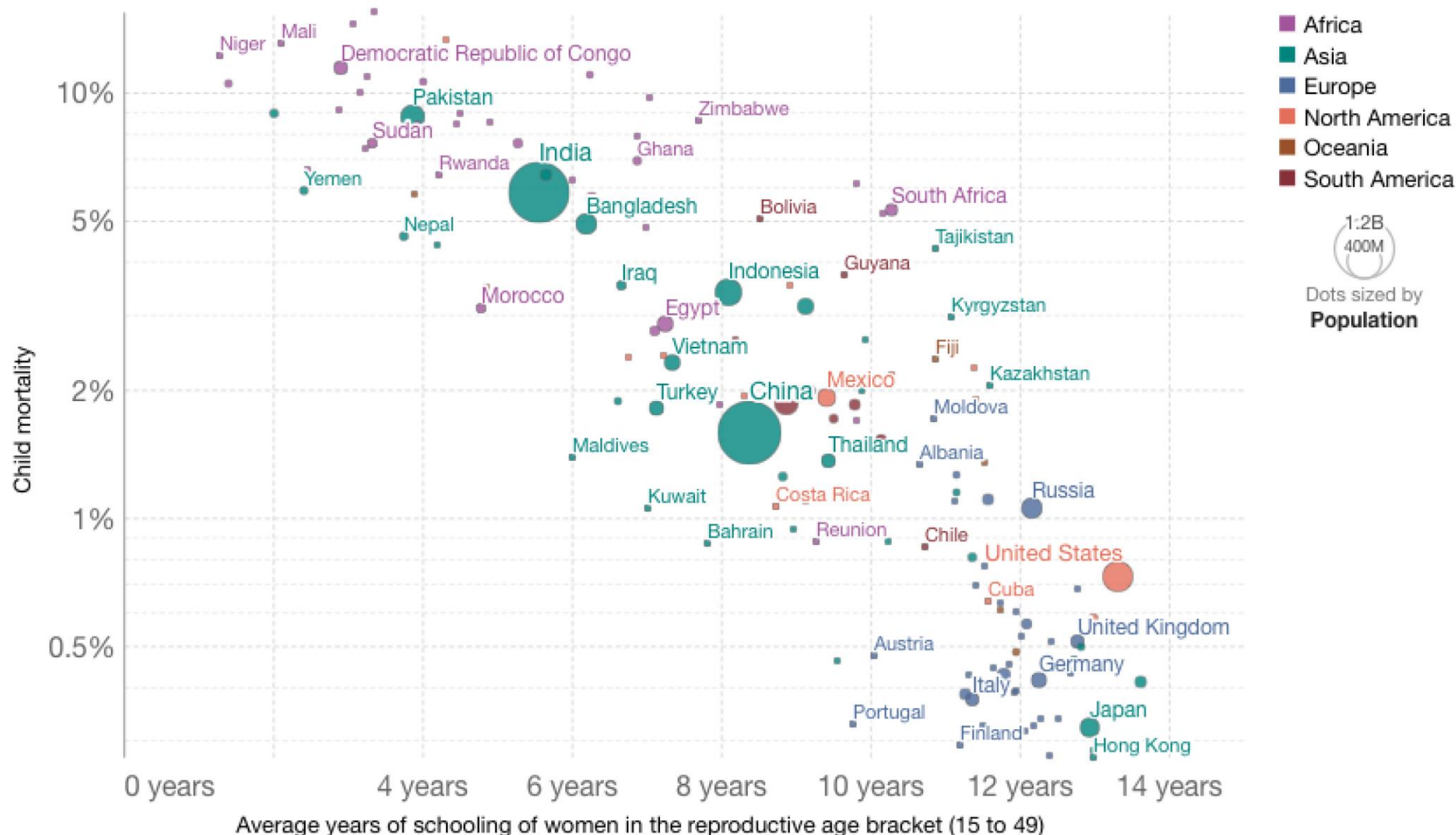
## Women's education is inversely correlated with child mortality

- An important body of literature stipulates that women's education leads to lower [child mortality](#) because it contributes towards healthier habits and choices, including child spacing
- The visualization shows the strong cross-country correlation between child mortality and educational attainment.

# Child mortality vs. women's average years of schooling, 2010

Our World  
in Data

The child mortality rate is the share of children who die before reaching the age of five.

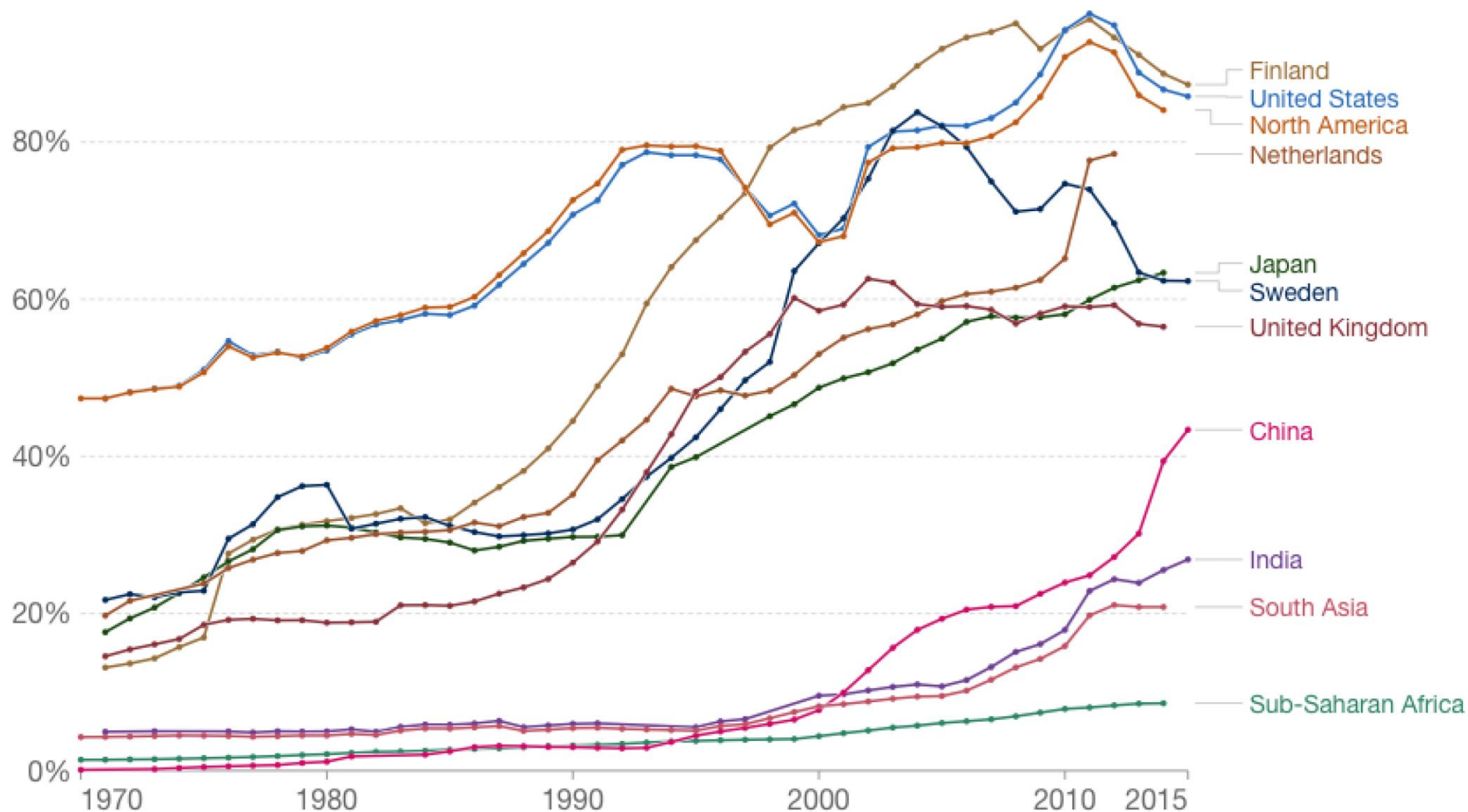


# Education outcomes predict economic growth

- The economics literature has long studied whether the level of education in a country is a determinant of economic growth.
- This question is motivated by the notion that aggregate education ('human capital') generates positive spill-over effects for everyone.
- A classic example of a mechanism through which education may yield such positive economic externalities, is that aggregate education improves a country's ability to innovate, as well as imitate and adapt new technologies, hence enabling 'technological progress' and sustained growth (see Lindahl and Krueger (2001) for an overview of further macroeconomic theories of education and growth).
- While early studies found that schooling levels were poor predictors of economic growth, more recent studies – that crucially made use of better data – confirm the expected positive link.
- Lutz, Creso Cuaresma, and Sanderson (2008) conclude that *"better education does not only lead to higher individual income, but also is a necessary (although not always sufficient) precondition for long-term economic growth."*

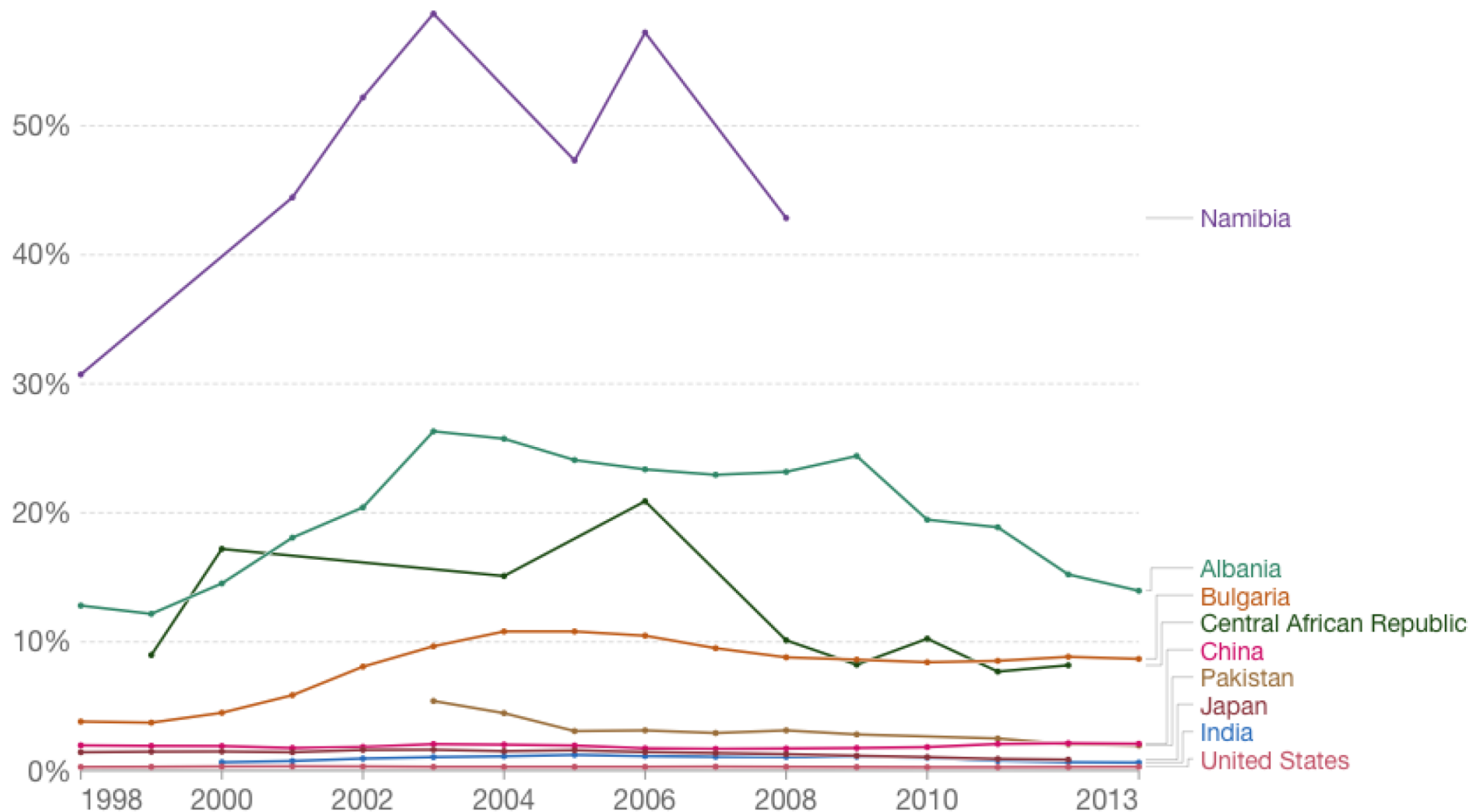
# Gross enrollment ratio in tertiary education, 1970 to 2015

Total enrollment in tertiary education, regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving.



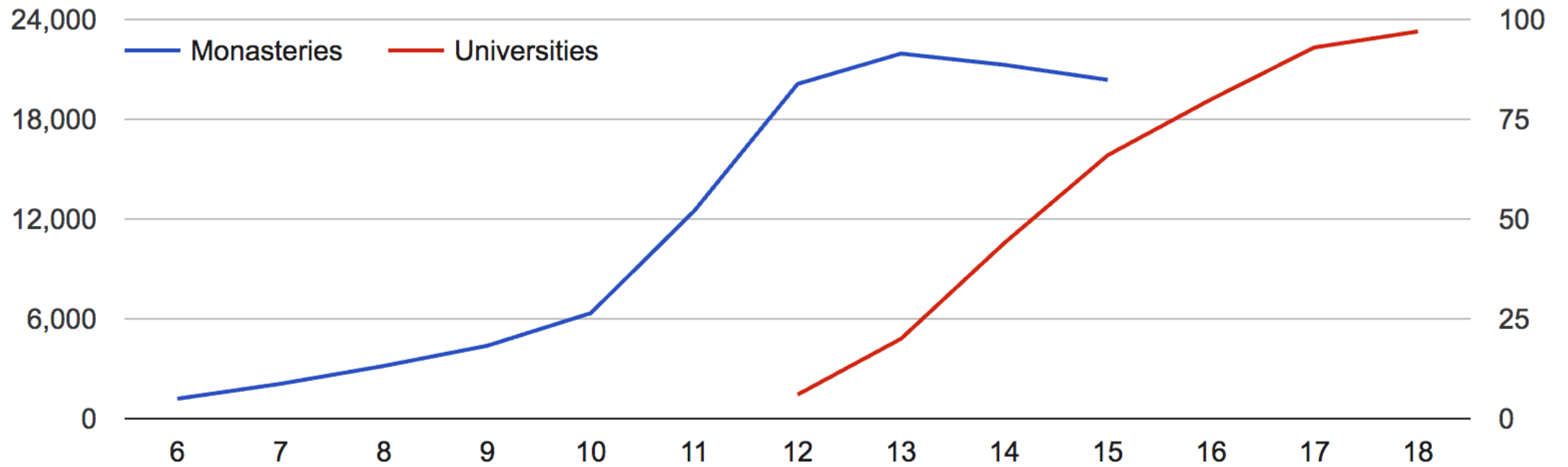
# Share of students studying abroad, 1998 to 2013

Number of students from a given country studying abroad as a percentage of the total tertiary enrollment in that country.





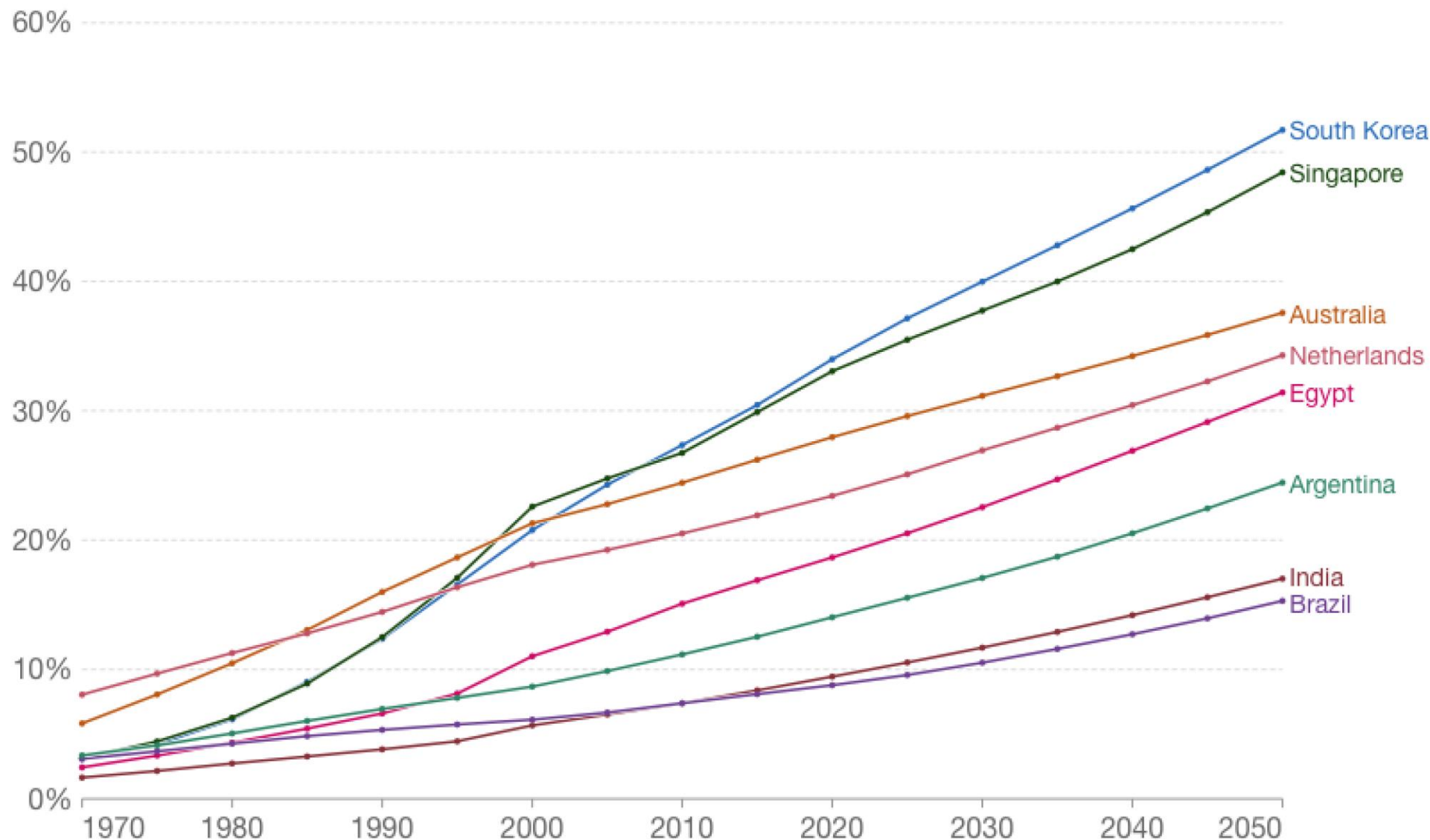
*Total number of monasteries and total number of universities in Western Europe, 600-1800*





# Projections of the share of adults educated to degree level, 1970 to 2050

Adults are defined as those aged 15 years and older.



# Population aged 15+ by highest level of education achieved, India, 1970 to 2050

For definitions of the levels of education see the 'Sources' tab.

