

Multi-State Back-Projection of the World Population by Age, Sex and Education for 2010-1960: Method, Data, Validation

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Extended abstract

For many years economists studying economic growth have been puzzled by the fact that indicators of the human capital of a population do not consistently show significant positive coefficients as expected from the theory. In 2007, using demographic multi-state methods for back-projection along cohort lines, Lutz et al. (2007) produced a fully consistent historical data set by five-year age groups, sex and four educational attainment categories for 120 countries for 1970-2000. With this dataset, Lutz et al. (2008) were able to show more consistent and significant positive returns to education than other data sets. As expected, improvements in educational attainment of younger adults tend to have the greatest positive effect, and a large share of population with at least lower secondary education was highlighted as the key parameter to boost economic growth. We present here an updated version of the database with the inclusion for the period 2010-1960 for 170 countries and six education categories.

How are the IIASA-VID data better than other data sets?

As compared to the so far existing data sets by Barro and Lee (2010), De la Fuente and Domenech as well as Cohen and Soto (2007), only our data:

- Take into account the fact that mortality differs by level of education in all age groups.
- Have education categories that are consistent over time.
- Provide detailed reconstruction of educational attainment by six educational categories (no education, incomplete primary, completed primary, completed lower secondary, completed upper secondary, post-secondary) and by 5-year age groups.

Most economic growth regressions so far approximated human capital by only one variable giving the mean years of schooling of the population above age 25. This indicator includes all elderly people beyond retirement age and therefore shows a much slower pace of improving average human capital than age-specific indicators for younger adults. In addition, the full distribution of educational attainment categories by age allows for important empirical studies about the relative importance of primary education as compared to secondary and tertiary in the course of development.

References:

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