Modelling human capital formation as the basis for assessing the benefits of education:
A global perspective

The methods of multi-dimensional population analysis and modeling, which were developed by Nathan Keyfitz and Andrei Rogers during the 1970s and early 1980s in and around IIASA provide powerful tools for explicitly considering population heterogeneity that goes beyond the conventional break-down by age and sex. Over the last decade work at IIASA has demonstrated that the level of highest educational attainment is probably the single most important source of population heterogeneity because in virtually all countries of the world women with higher levels of education have fewer children and both men and women with higher education live longer. Along these lines IIASA has recently produced the first comprehensive reconstructions and projections of populations by age, sex and level of educational attainment for most countries of the world. For the future, alternative scenarios have been developed where different education expansion trajectories alone can lead to a difference of more than one billion in world population already by mid-century. These new comprehensive educational attainment data by age and sex reconstructed to 1970 were also used to firmly establish the key role of human capital for economic growth, but also for improvements in health and even for strengthening the adaptive capacity to already unavoidable climate change.

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