Anup Malani

"Measuring and explaining variation in the number of surviving children"

Abstract

The consequences of fertility decline flow from reduction in the number of surviving children, i.e., both births and survival, not simply from reductions in births. Moreover, neo-classical economic theories that attempt to explain fertility decline (e.g., quantity-quality models) hinge on preferences for surviving children, not births per se. This paper introduces a measure for surviving children: the effective fertility rate (EFR) is the current birth rate times the projected probability that a child survives until some age A. This age A could be 49 for a measure (EFR_R) that tracks reproductive potential, or 65 for one (EFR_L) that tracks income and taxes paid. While EFR_R can be approximated by existing demographic concepts such as the net reproductive age or the ratio of total fertility rate (TFR) to the reproductive fertility level, EFR_L is poorly approximated by existing concepts. Using data from 165 countries between 1950-2019, we first show that one-third of the global decline in TFR did not change EFR_L, suggesting that a substantial portion of fertility decline merely compensated for higher survival rates. Of the change in EFR_L, only one third can be explained by economic factors such as income, structural transformation, and urbanization. Second, while EFR fell below replacement in many countries between 1960 and 2000, in many countries it has stabilized at a level around 1.5 rather than continue to decline. Finally, we look at additional data on European countries since 1750 and Black and White populations in the US since 1800 to document long-term patterns in EFR.