

Title: Missing women, sex-ratios at birth, and the demographic transition

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Abstract: Estimates of the number of missing women at birth rely critically on correct estimates of the biological sex-ratio. Using data from 7 million births in the developing world, we improve upon the existing methodology of calculating sex-ratios at birth by parity and age by controlling for the fact that for biological reasons, births to older mothers and higher parity births should be skewed female. Then, using data on the evolution of age and number of births from the UN Population Prospects, we run counter-factual paths of the sex ratio at birth. We find that approximately one-third of the change in the sex-ratio at birth over the last 50 years was strictly due to biological reasons, implying that estimates of missing women at birth have been overstated by as much. In addition, estimates of missing women after birth have been under-counted by approximately 50%.