

# Starting together, growing apart:

Gender gaps in learning from preschool to adulthood in four developing countries<sup>\*</sup>

Abhijeet Singh  
*University College London*

Sofya Krutikova  
*Institute for Fiscal Studies*

October 17, 2016

## Abstract

This paper studies gender gaps in multiple learning domains – quantitative skills, vocabulary and reading – for children from the age of 5 to 19 years of age using unique panel data from Ethiopia, India, Peru and Vietnam on two cohorts of children with linked test scores and detailed household-based information. In all countries, both for math and receptive vocabulary, we find that there are no gender gaps prior to school entry (5 years); these gaps emerge later, widening particularly between the ages of 12 and 15 years, favouring boys in Ethiopia and India and favouring girls in Vietnam; subsequently, these learning gaps appear to mostly persist until early adulthood. Our analysis, both cross-sectional and over time, pays special attention to issues arising from selective enrolment, from the ordinality of test outcomes, and from the issue of decay in test scores. Finally, we investigate the sources of divergence between 12-15 years using panel-based value-added models with a rich set of covariates including past achievement, child health, time use, parental education and wealth, and the quality of schooling. In our most extensive specifications, we can explain between half and two-thirds of the cross-sectional gender gap in test scores but a substantial unexplained portion remains. To the best of our knowledge, this is the most extensive comparable panel-based investigation of this question over a long age range, covering multiple countries and test domains, and with extensive background information to enable an investigation of the sources of observed gaps.

---

<sup>\*</sup>Preliminary draft, for comments only. Please do not cite or circulate without permission of the authors. We thank Sonia Bhalotra, Doug Gollin, Krzysztof Karbownik, Diane Schenzenbach and seminar participants at the University of Oxford, the APPAM International Conference (LSE) and Friedrich Alexander University, Nuremberg for helpful comments. This project is based on data from the Young Lives study which is core-funded by UK aid from the Department for International Development and was co-funded from 2010 to 2014 by the Netherlands Ministry of Foreign Affairs.