

# Keynote on Inequality of Opportunity and Intergenerational Persistence in Latin America

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# Contribution of the paper

- Examines cross-sectional inequality and relates it to inequality of opportunity (IOP): the inequality caused by pre-determined circumstances of birth
- Key innovations in terms of using machine learning techniques (conditional inference trees and random forests and transformation trees to estimate ex-ante and ex-post IOp. These techniques solve the well-known problems of dimensionality, particularly making partitioning parsimonious and less subjective.
- Relates IOp to intergenerational persistence

# Main Findings

- In most cases, more than half of the current generation's inequality is inherited from the past – with a range between 40% and 63%.
- ...the circumstances that account for the largest share of inequality of opportunity as measured by the Gini coefficient are mother's and father's education which, together represent just over 50% of the total for the simple LAC average.
- IOp estimates are larger than Intergenerational correlation estimates. More explanatory variables in IOp.
- ..... on balance, given the parsimony of the population partitions, these are very likely to be underestimates.

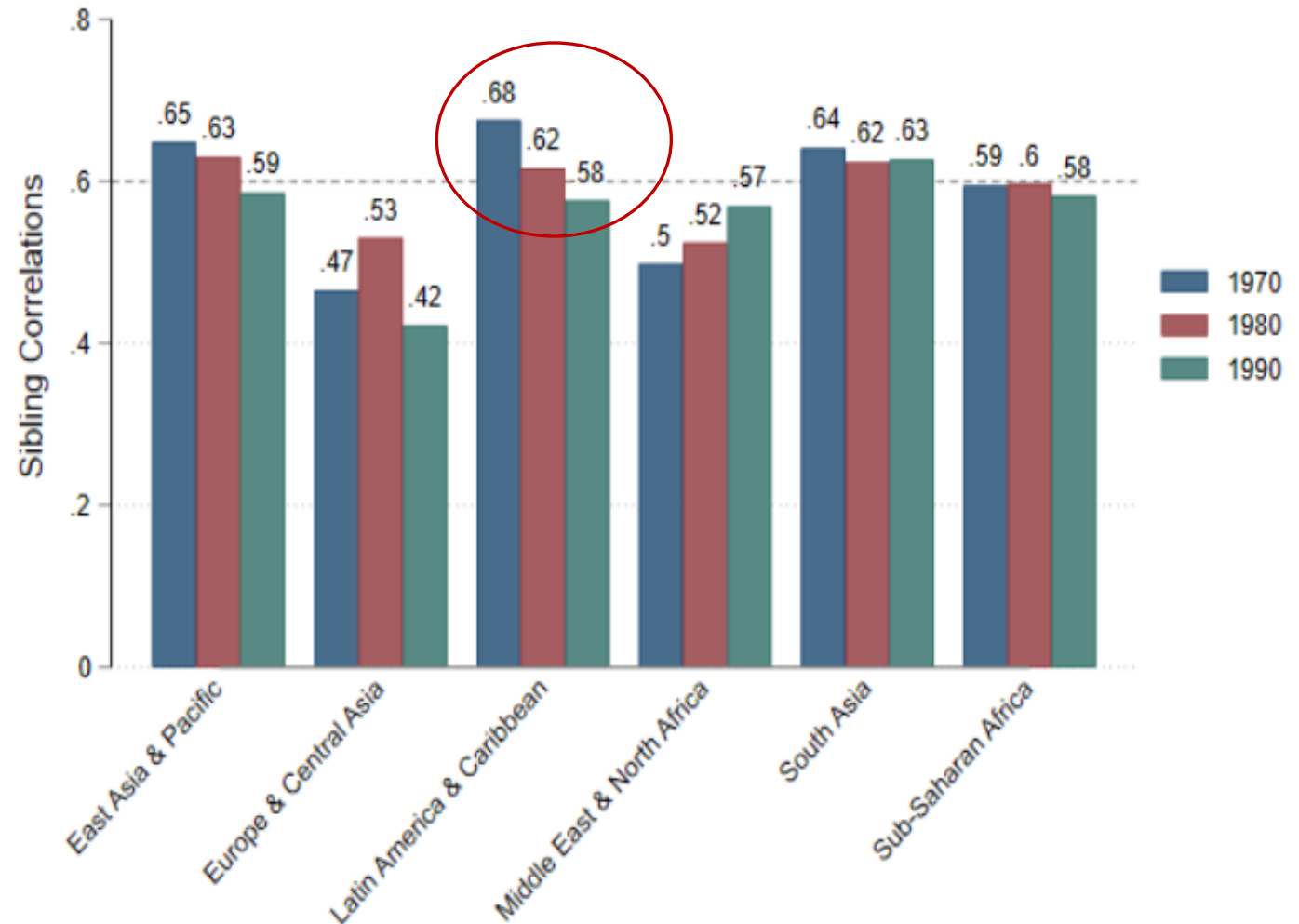
# Broadening the research agenda

- Can we have a broader measure of inequality that will capture unobservable family background as well?
- How important is parents' education in explaining the family background influence?
- Is immobility/persistence higher for more disadvantaged children?
- What policies will weaken this persistence?

A broader measure (Sibling Correlation) indicates a much larger role of the family background

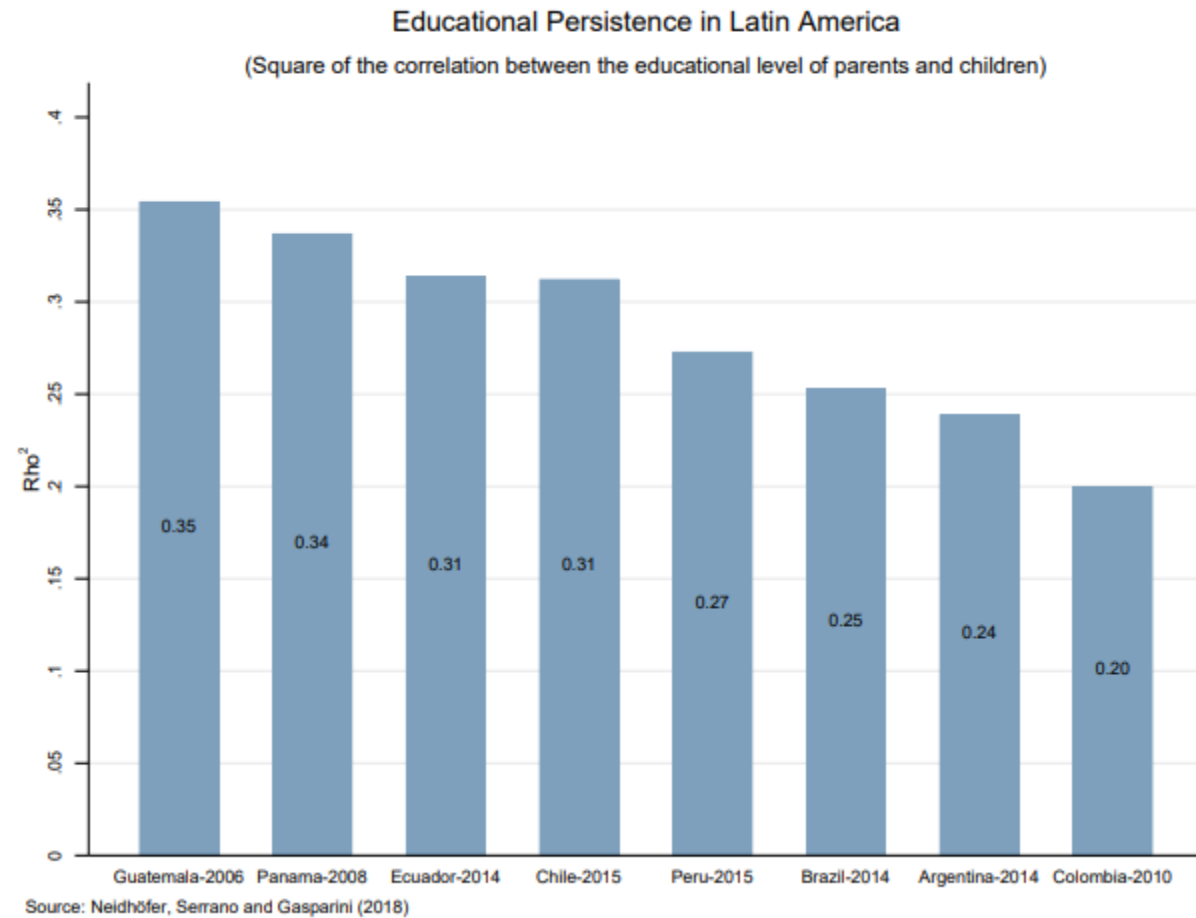
- Captures all factors that are common to siblings: characteristics of parents, extended family, neighborhood, school, and so on.
- Captures both observables and un-observables
- Estimates: 0.57-0.71, larger than 0.45-0.6 (IGC)
- 60% higher than average for developed countries

Figure 2: Sibling Correlations by Regions and Cohorts

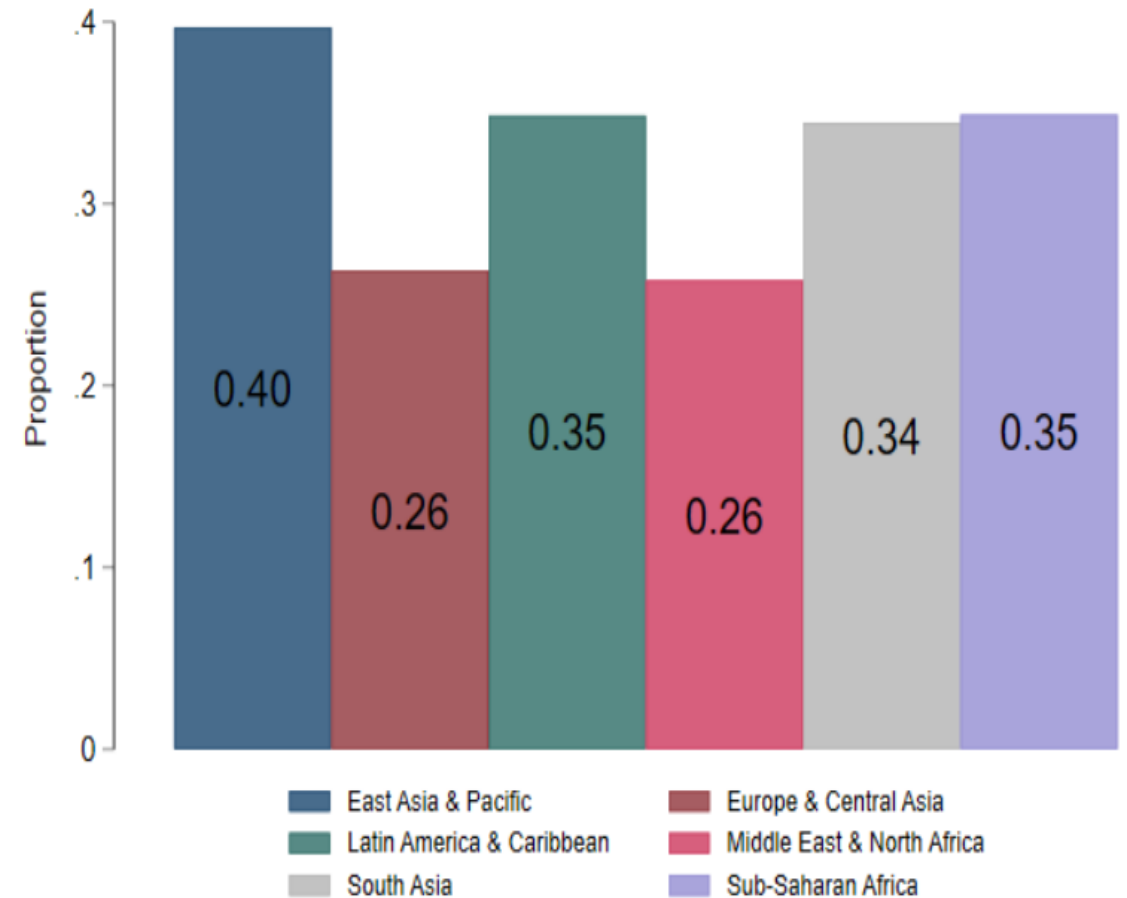


# How important is parental schooling?

Under some assumptions (homogeneity, normality, and independence): square of Pearson correlation => intergenerational share



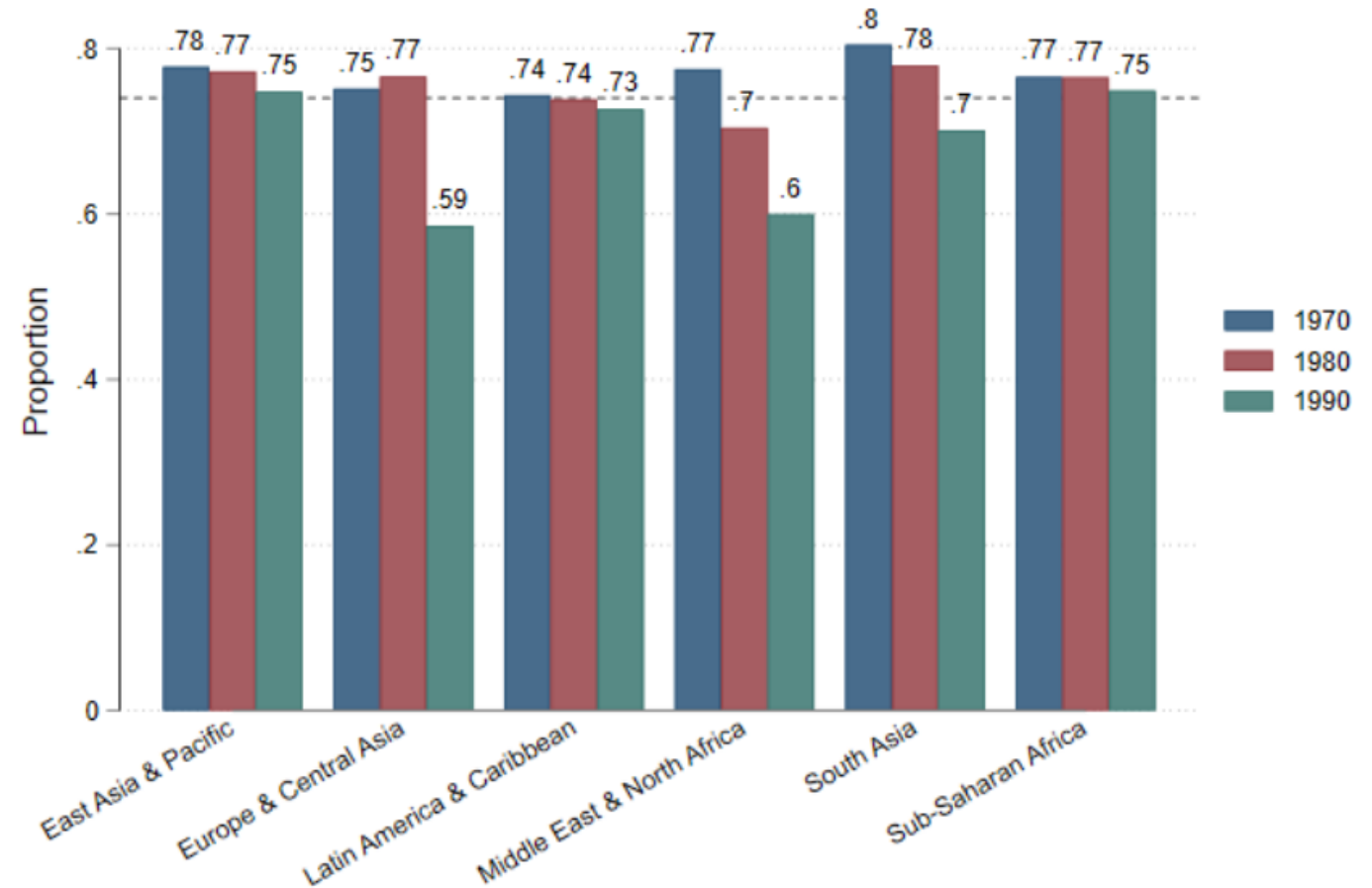
**Figure 3B: Proportion of Sibling Correlations Explained by Intergenerational Transmission by Regions (Bjorklund et al. 2010 Method)**



# Intergenerational transmission is much more important than what traditional /standard estimates imply

- Bingley and Cappellari (2019) suggest a method to relax the assumptions of homogeneity, normality, and independence.
- Relaxing these assumptions, the intergenerational share is much larger– more than double
- Much larger than relative IOP
- Normality is rejected in almost countries
- Variance of residual is correlated with parent's schooling

**Figure 4: Proportion of Sibling Correlations Explained by Intergenerational Transmission by Regions and Cohorts (Bingley and Cappellari 2019 Method)**



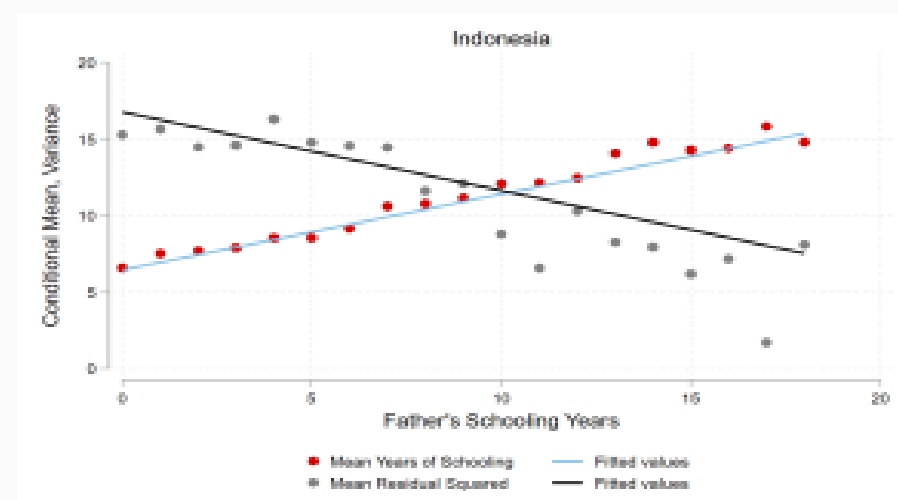
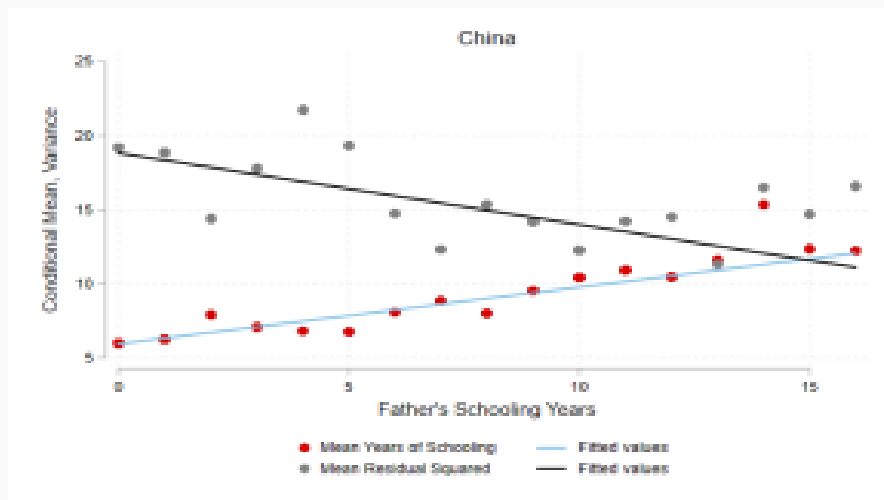
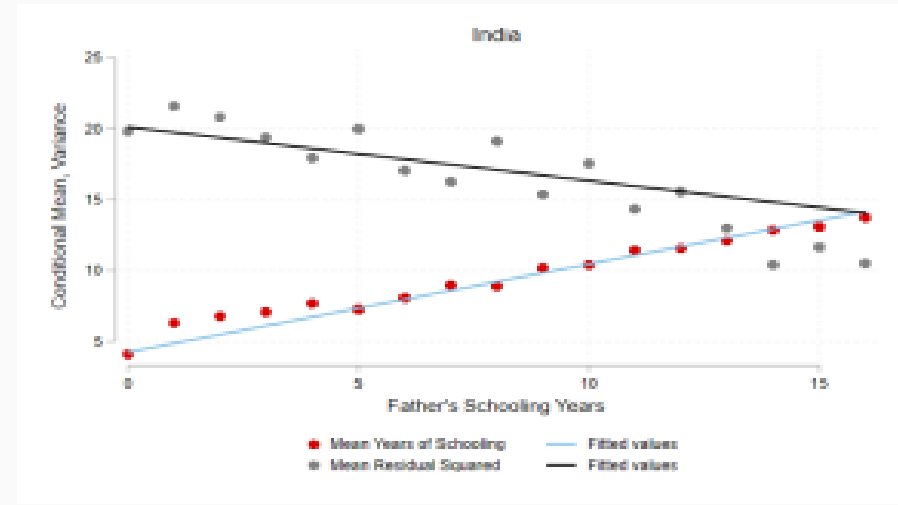
# Conditional Mean and Variance of Child's Schooling Against Father's Schooling

1.  $S_i^c = \alpha + \beta S_i^p + \epsilon_i$

Father's education has a substantial *positive* effect on the **expected mean** schooling of children.

2.  $V(\epsilon_i) = \theta_0 + \theta_1 S_i^p + v_i$

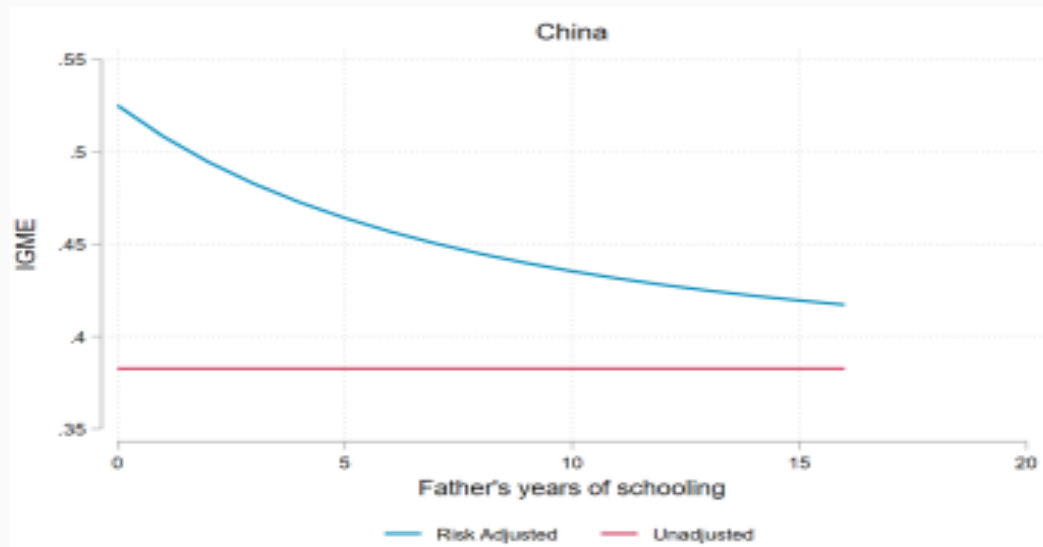
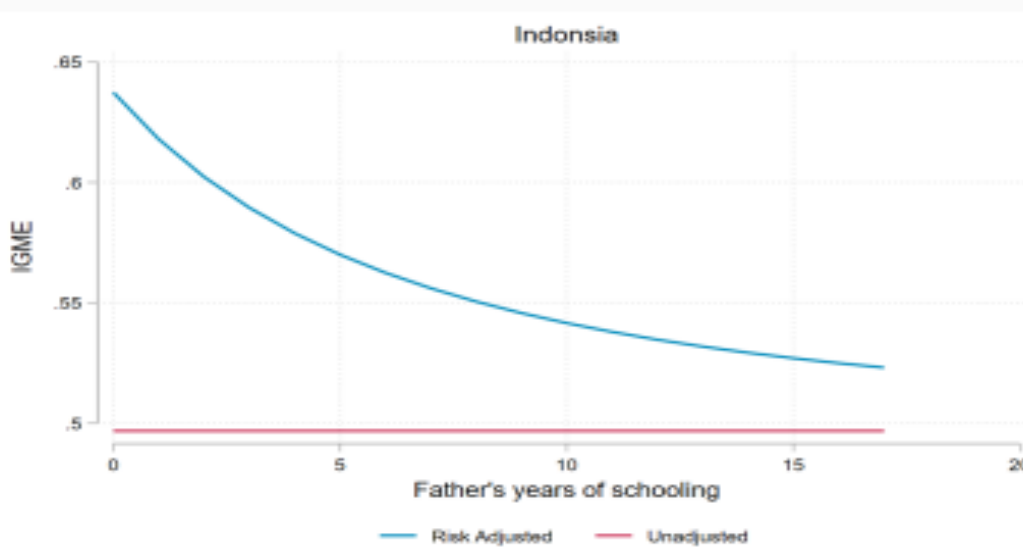
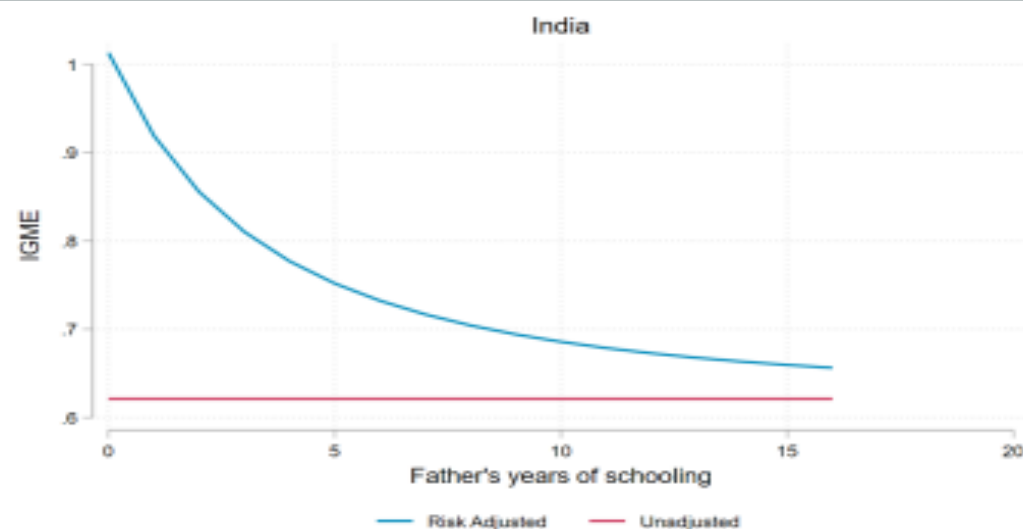
**Conditional variance** of children's schooling is a *negative* function of father's education.





# Risk Adjusted and Standard Relative Mobility

1. Standard IGRC in **red**
2. Risk adjusted in **blue**  $\Rightarrow$  *nonlinear*
3. Accounting for risk shows a much worse educational opportunities for the children born to fathers with low education.



- Canonical IGRC's underestimation for the most disadvantaged children: **41% in China, 63% in India, 28% in Indonesia**

# From measurement to policy impacts

- Measurements are an important starting point, but in the end, we want to know how IOp can be improved and how intergenerational persistence can be driven down
- This will need developing models to lay out the potential channels through which a policy (e. g. improving access to school or school quality) will affect parental inputs and children's absolute and relative mobility ([Ahsan, Emran and Shilpi, 2022](#))
- Lots of literature on impacts on absolute mobility (mean effects) but very little on relative mobility
- This is perhaps the frontier of research in this area right now