IS EDUCATION SUPPORTING INTERGENERATIONAL MOBILITY IN BANGLADESH?

SERIES TALK ON THE FORTHCOMING POVERTY AND EQUITY ASSESSMENT

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DATA AND MODEL

- Objectives: examine intergenerational educational mobility in Bangladesh, analyze trends from 1950 to 1990, and focus on gender and geographic disparities.
- Data: Bangladesh Household Income and Expenditure Survey - 2024

SECTION 2: EDUCATION **PART B: CURRENT ENROLLMENT (ALL PERSONS 5 YEARS AND ABOVE)**

Respondent ID Code	ID Code as in Roster	13	14			15		16		17	
		Whether your (name) Father/Mother/Guardian (In the absence of parents) are from same household?	Father/Mother/Guardian (In the absence of parents) Line No.			What was the highest class that your father completed?		What was the highest class that your mother completed?		What was the highest class that your guardian completed (in the absence of parents)? (If one of the parents is alive then no other guardian is applicable)	
			Father's ID Code	Mother's ID Code	Guardian's ID Code (In the absence of parents)	00 No class passed/pre-schooling	09 Class 9	00 No class passed/pre-schooling	09 Class 9	00 No class passed/pre-schooling	09 Class 9
						01 Class 1	10 SSC/equivalent	01 Class 1	10 SSC/equivalent	01 Class 1	10 SSC/equivalent
						02 Class 2	11 HSC/equivalent	02 Class 2	11 HSC/equivalent	02 Class 2	11 HSC/equivalent
						03 Class 3	12 Vocational	03 Class 3	12 Vocational	03 Class 3	12 Vocational
						04 Class 4	13 Midwifery/Nursing	04 Class 4	13 Midwifery/Nursing	04 Class 4	13 Midwifery/Nursing
		1 Yes				05 PEC/equivalent	14 Technical Education	05 PEC/equivalent	14 Technical Education	05 PEC/equivalent	14 Technical Education
		2 No >> Q15				06 Class 6	15 Graduation/ equivalent	06 Class 6	15 Graduation/ equivalent	06 Class 6	15 Graduation/ equivalent
						07 Class 7	16 MBBS	07 Class 7	16 MBBS	07 Class 7	16 MBBS
						08 JSC /Equivalent	17 Engineering	08 JSC /Equivalent	17 Engineering	08 JSC /Equivalent	17 Engineering
							18 Post graduation /equivalent		18 Post graduation /equivalent		18 Post graduation /equivalent
			>> Next person				19 Other (Specify)		19 Other (Specify)		19 Other (Specify)
	01										
	01										
	02										
	03										
	04										

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DATA AND MODEL

- Child: Adults aged 18 and above at the time of the survey and for whom parent's educational information is available (Survey years: 2022).
- Key variables from data:
  - Household roster and relationship to the household head
  - Gender (education of both son and daughter living with a parent)
  - Questions on educational grades and levels reported
  - Parents' educational information is available
- Parent: refers to the parent (mother or father) of the identified child – age 18 and above. Educational backgrounds for parents (both mother and father) are available.
- Co-resident grandparents are recorded as parents to the household head—mother or father if clearly identified—and parental educational information is missing in the parents' education folder.

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DATA AND MODEL

Relation to Head of Household	Total HIES		Sample: 18–70-year-olds	
	Male	Female	Male	Female
The head of the house	12,641	1,663	12,101	1,596
Spouse	183	12,042	169	11,931
Son / daughter	14,467	9,911	5,536	1,926
Daughter-in-law / son-in-law	194	2,303	165	2,106
Granddaughter	1,780	1,650		
Father / mother	609	1,973	354	1,509
Brother / sister	682	404	574	319
Nephew / niece	248	207		
Father-in-law/Mother-in-law	44	239	23	171
Brother-in-law / sister-in-law	71	47	67	32
Other relatives (specify)	98	343		
Housemaid / Housemaid	9	55		
Employee	13	2		
Other	40	95		
Total	31,079	30,934	18,989	19,590

Sample by gender; Source: HIES 2022

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DATA AND MODEL

Intergenerational persistence ($IGRC$) results from the following level-level OLS regression:

$$Ed_i^{G1} = \alpha + \beta_2 Ed_i^{G2} + \varepsilon_i$$

The estimated coefficient $\hat{\beta}$ measures intergenerational persistence (IGRC).

- $\hat{\beta} = 0$ → complete mobility as a child's educational outcomes are independent of those of their parents.
- $\hat{\beta} = 1$ → complete immobility as a child's educational outcomes are fully determined by the parental education status.

In essence, lower-value estimates of $\hat{\beta}$ imply lower intergenerational persistence, while a higher value implies greater persistence.

The intergenerational mobility is therefore measured by 1- $\hat{\beta}$.

DATA AND MODEL

Intergenerational correlation (IGC):

$$\rho_i = \frac{Cov(Ed_i^{G1}, Ed_i^{G2})}{\sigma_i^{G1} \cdot \sigma_i^{G2}}$$

- $Cov\left(Ed_i^{G1}, Ed_i^{G2}\right)$ is the covariance between parents' and children's educational attainment of individual i,
- $\sigma_i^{G1}$is the standard deviation of children
- σ_i^{G2} is the standard deviation of parents

IGRC can also be expressed as a function of IGC as follows:

$$\beta = \rho \cdot \frac{\sigma_i^{G1}}{\sigma_i^{G2}}$$

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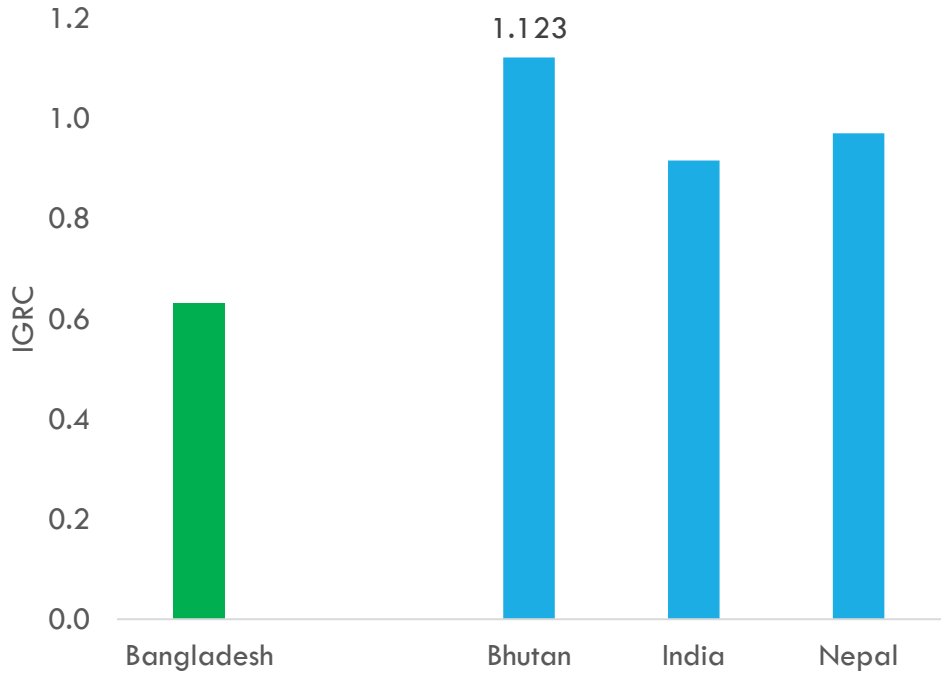
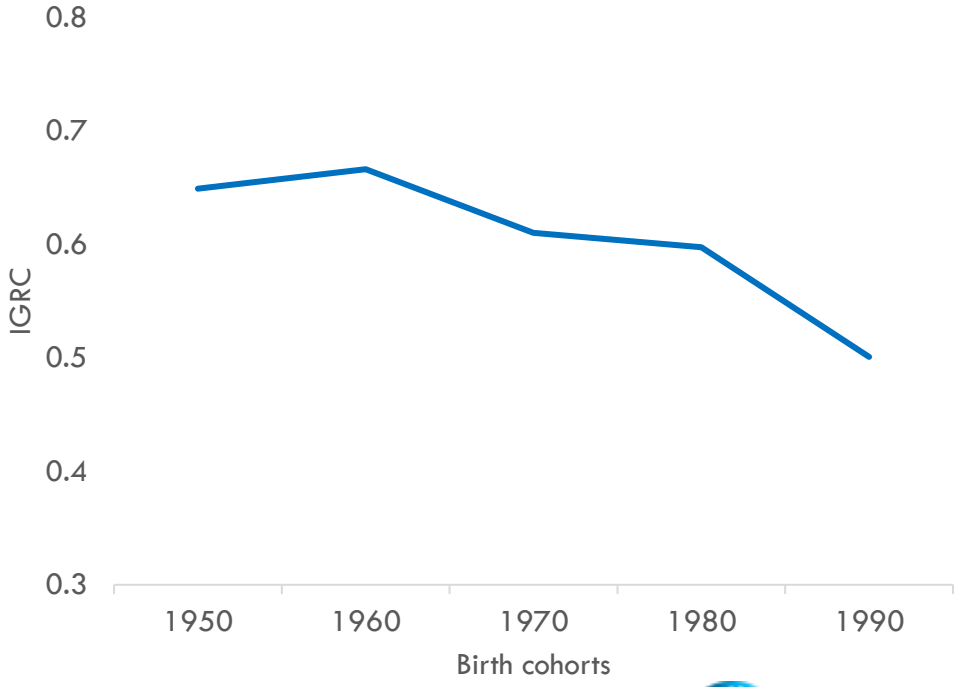
EDUCATIONAL ADVANCES BOOST INTERGENERATIONAL MOBILITY FOR YOUNGER GENERATIONS…

Intergenerational educational mobility is higher than in neighboring countries, and



…has been enhancing over time, more evident among younger cohorts



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)
Note: Bhutan, India, and Nepal are based on the GDMI database. All countries are averages for the ten-year cohorts from the 1950 and 1980s.

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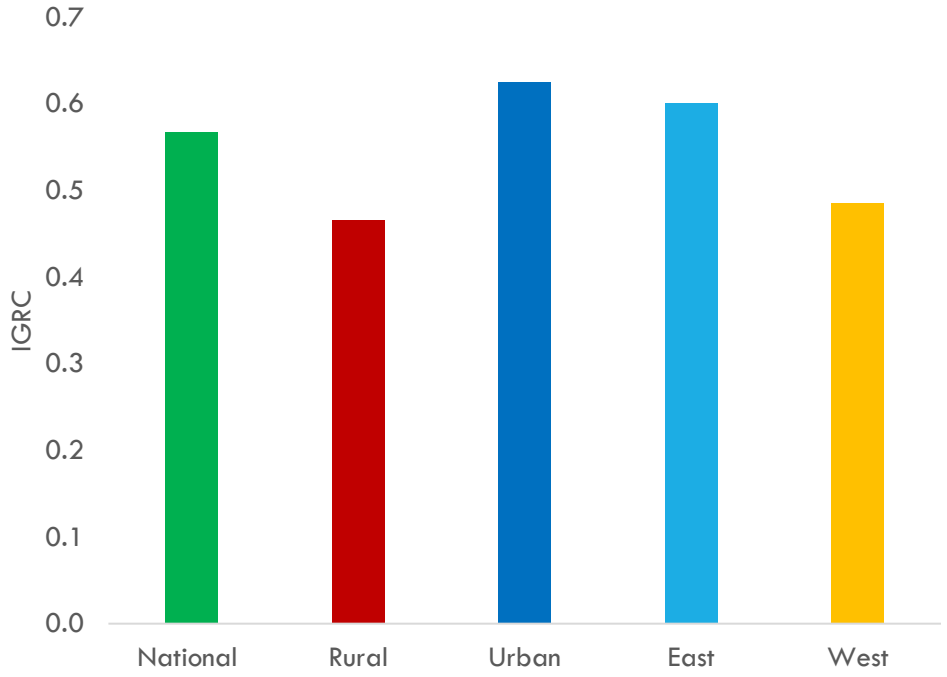
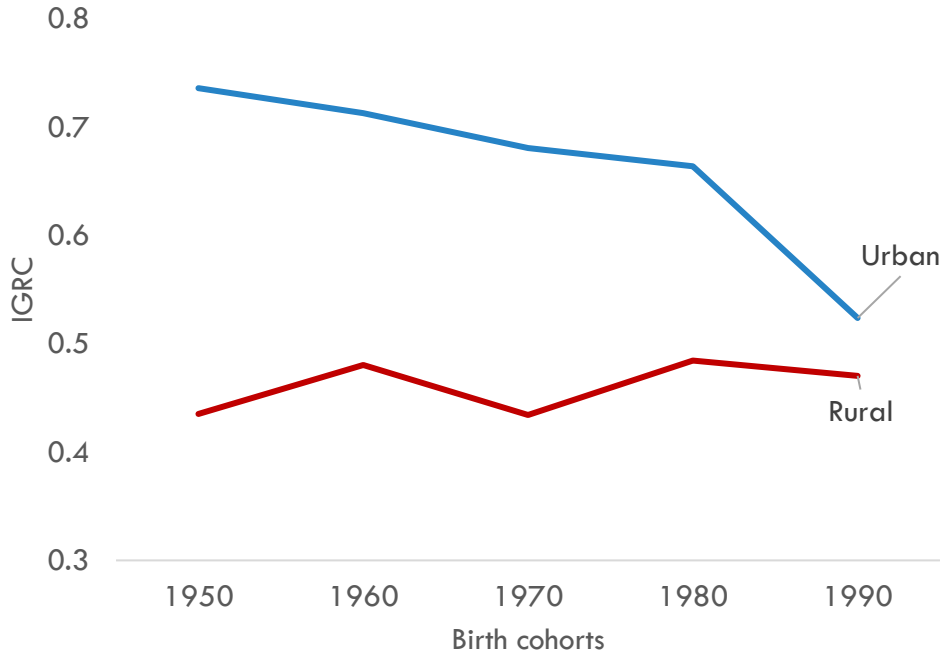
. . . ATTRIBUTABLE TO IMPROVED EDUCATIONAL MOBILITY ACROSS SPACE . . .

There is a rural premium and strong intergenerational links in the East…



…but convergence over time, by improved mobility in urban areas



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)

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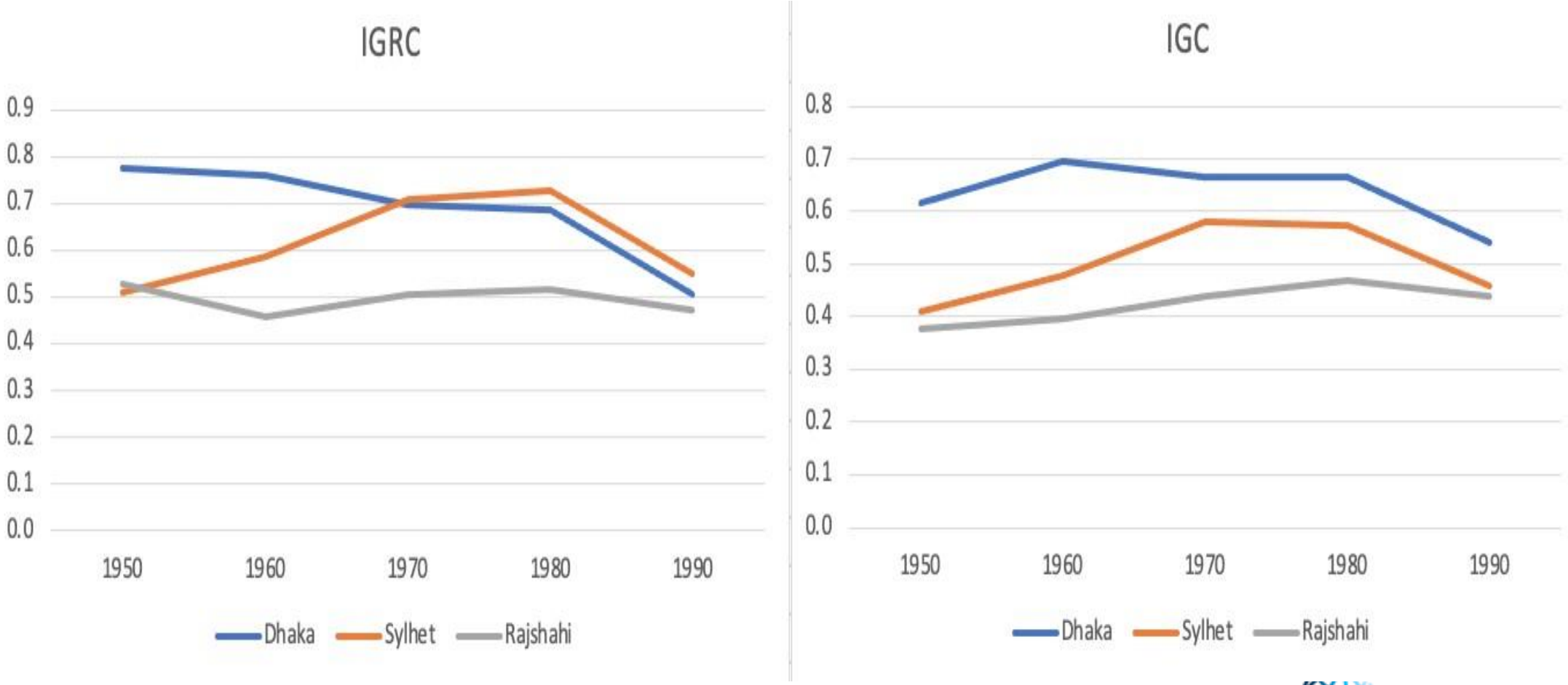
INTERGENERATIONAL EDUCATION MOBILITY DHAKA, SYLHET AND RAJSHAHI: 1950 TO 1990



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)

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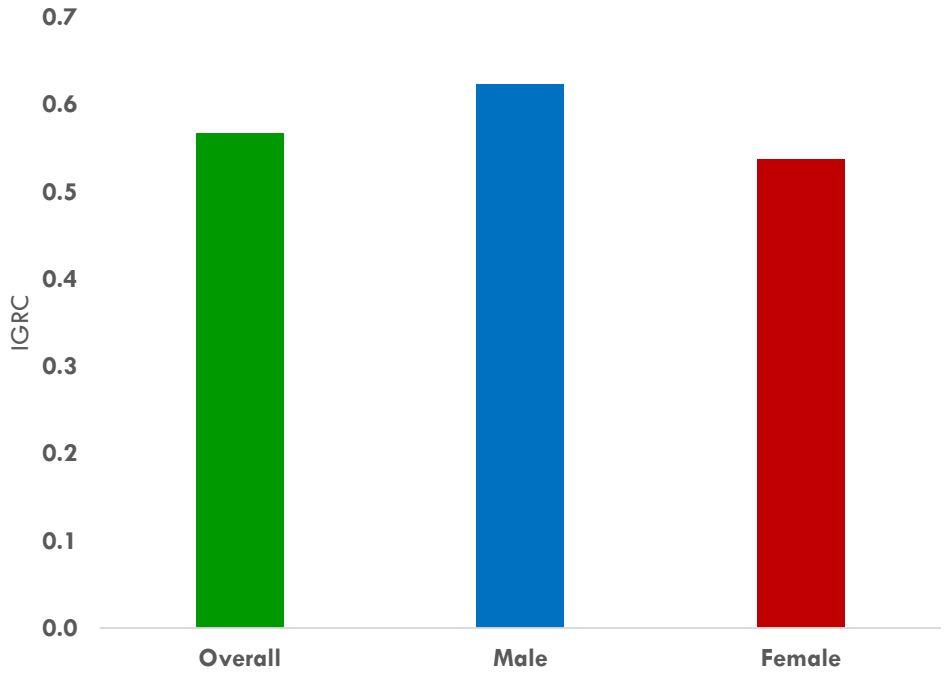
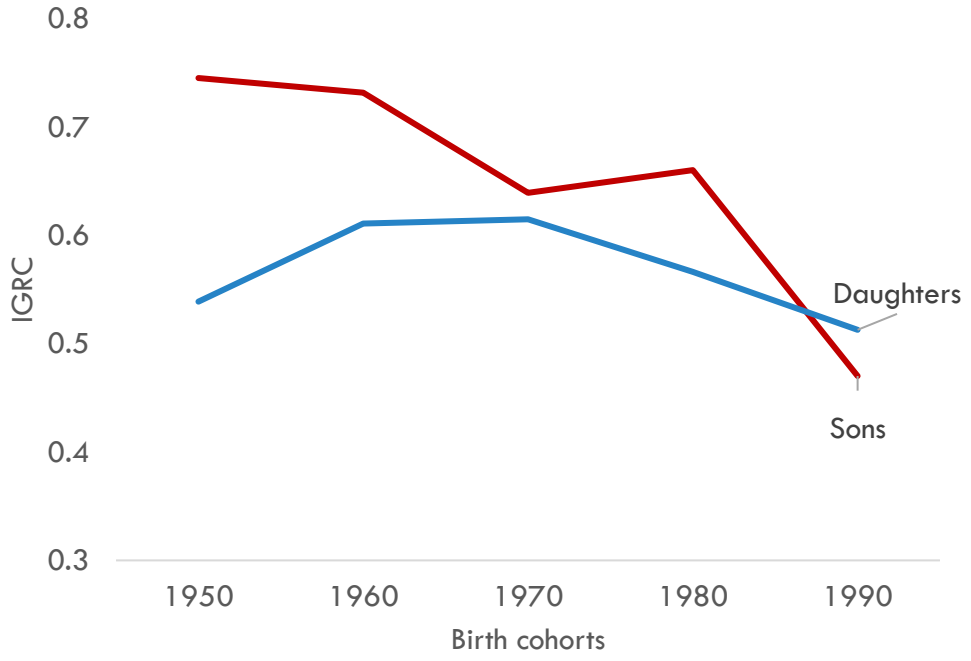
...WEAKENED PARENTS-CHILDREN EDUCATIONAL LINKS ESPECIALLY FOR SONS...

Stronger educational link between parents and sons than daughters...



...but weakened for younger cohorts and narrowed the gap



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)

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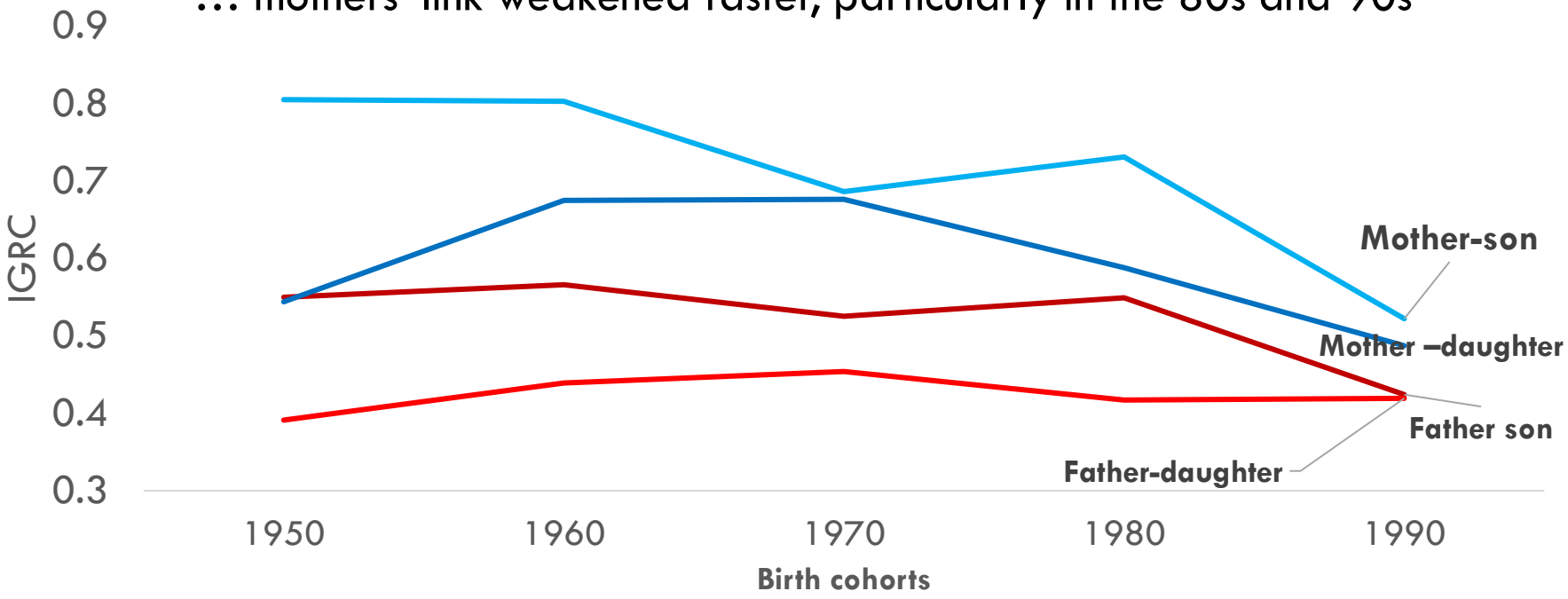
…SHIFT EDUCATIONAL LINKS BETWEEN GENERATION AND ACROSS GENDER

… mothers' link weakened faster, particularly in the 80s and 90s



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)

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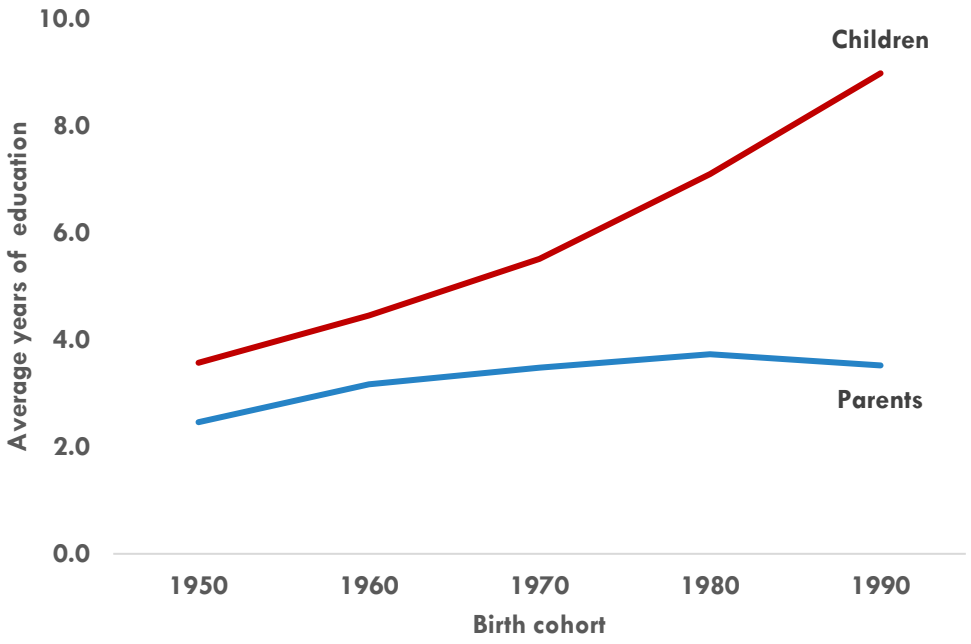
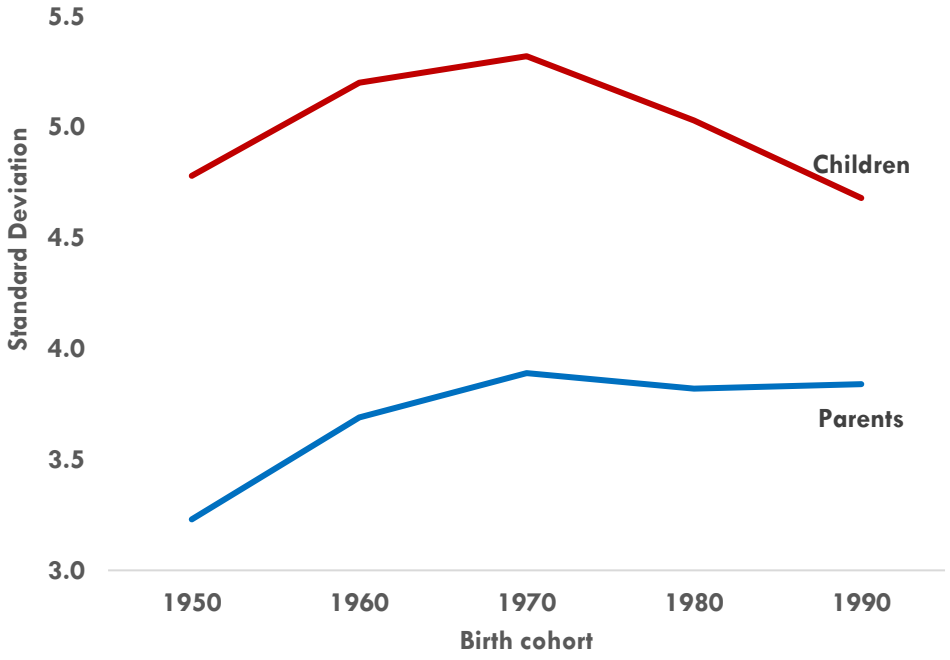
IMPROVED MOBILITY IN RECENT COHORTS TIED TO EDUCATIONAL DISTRIBUTION CHANGES, POTENTIALLY DRIVEN BY EDUCATION POLICIES…

Children increased significantly faster years of education than parents…



…while education inequality rises and falls, as they progress



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)

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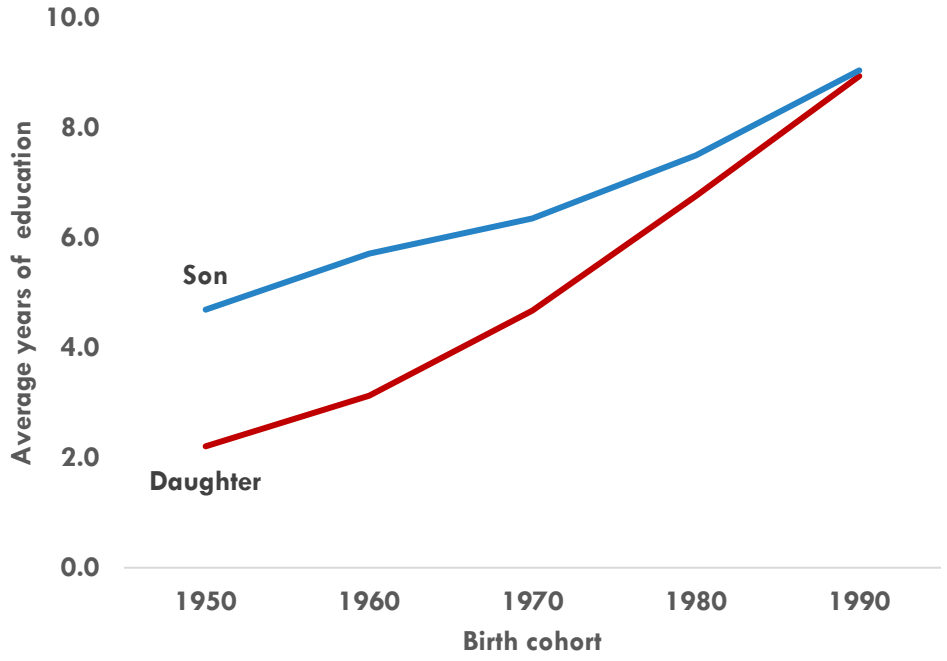
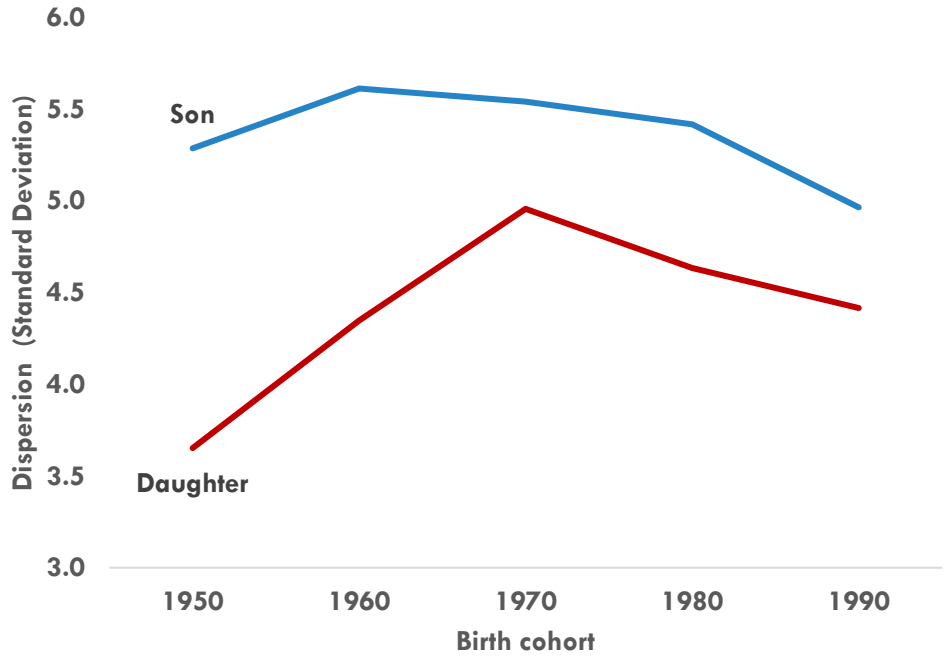
THAT SIGNIFICANTLY BENEFITS WOMEN IN THOSE COHORTS

Compulsory primary education in the 90s shrinks education gender gap…



..while education inequality rapidly increases and slowly falls for women



Source: Based on forthcoming Olivieri, Razzu and Wambile (2024)

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FINAL REMARKS AND RECOMMENDATION

- Cross-generation mobility in educational outcomes increases across birth-cohorts

  …particularly since the 1990s, indicating an overall increase in mobility.

- Educational developments over time appear to be defined by three moments…

  …before independence, the early 1970s, and the1990s.

- Despite convergence, disparities persists by gender and region

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FINAL REMARKS AND RECOMMENDATION

In terms of policies :

- Expanding access to quality early childhood education to provide a strong foundation for all children, regardless of one's socioeconomic background
- Enhancing access and quality education at all levels – through better infrastructure, trained teachers, and modern teaching methods, and where gaps exist establishing vocational and other colleges.
- Targeting programs for disadvantaged groups, and to accommodate children who start school later or have interrupted schooling due to economic or environmental shocks
- Focusing educational programs to close the gender gap

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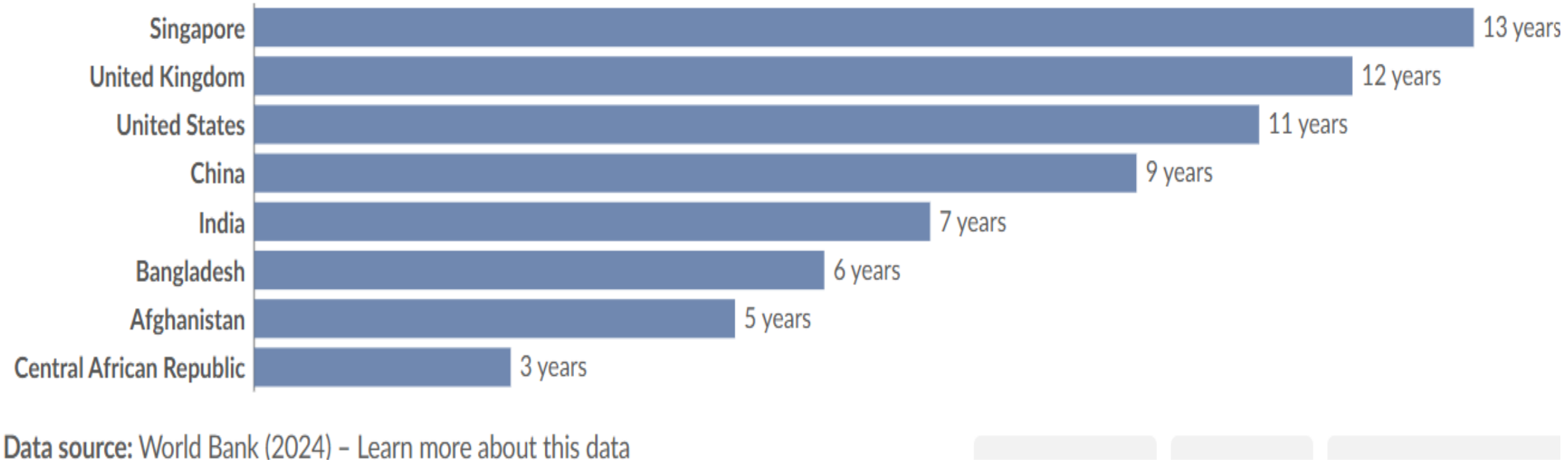
THANK YOU

Average learning-adjusted years of schooling



Data source: World Bank (2024) – Learn more about this data

Average learning-adjusted years of schooling - merges the quantity and quality of education into one metric, accounting for the fact that similar durations of schooling can yield different learning outcomes.

based on 2016 data.

MODEL AND DATA

Average education				
Birth cohort	Male	Female	Father	Mother
1950	4.69	2.21	3.26	1.64
1960	5.70	3.12	4.08	2.22
1970	6.34	4.67	4.36	2.50
1980	7.49	6.75	4.11	2.50
1990	9.03	8.93	4.02	2.81
Standard Deviation				
Birth cohort	Male	Female	Father	Mother
1950	5.29	3.65	4.19	2.73
1960	5.61	4.35	4.65	3.18
1970	5.54	4.96	4.78	3.35
1980	5.42	4.63	4.60	3.32
1990	4.96	4.42	4.41	3.39

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DATA REQUIREMENT IN ESTIMATING INTERGENERATIONAL MOBILITY

- *Possible data sources:*
  - Panel or longitudinal data that tracks household members over time (Mazumder (2005); Haveman and Wolfe (1995)
  - Cross-sectional data with information of all household members in the roaster or based on retrospective questions asked to children about their parents (example: Blanden, Goodman, Gregg and Machin (2003) in UK)
    - Welfare surveys, DHS.
  - Census or administrative data