G²LM|LIC
Gender, Growth, and Labour Markets in Low Income Countries Programme

WP

G²LM|LIC Working Paper No. 120 | September 2026

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Aditi Bhowmick (Harvard University)
Sara Sethia (Development Data Lab)
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G²LM|LIC
c/o IZA – Institute of Labor Economics
Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-510

Email: glm-contact@iza.org

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ABSTRACT

The Female Urban Mobility Advantage*

We study intergenerational educational mobility for men and women across South Asia, using 30 harmonized living standards surveys covering cohorts born since 1980. We describe a new stylized fact: upward mobility in South Asia is higher in cities, and the urban mobility premium is substantially higher for women than for men. In the majority of subnational regions, women in cities have higher upward mobility than men, in addition to a larger urban-rural gap. Evidence is consistent with higher returns to education for women in cities and less patriarchal social norms as mechanisms. By contrast, higher consumption and income levels in cities have little explanatory power for the female urban mobility advantage. The advantage is largest where gender norms are more conservative among high-income people; in these places, new female-friendly jobs may be more accessible to lower-class women.

JEL Classification:
J62, J16, I24

Keywords:
Intergenerational mobility, gender, inequality

Corresponding author:
Paul Novosad (Dartmouth College)
Email: paul.novosad@dartmouth.edu

* This project received funding from the UK Foreign, Commonwealth & Development Office (FCDO), the Institute of Labor Economics (IZA) within the G2LM|LIC Programme, and the World Bank. The views expressed are not necessarily those of FCDO, IZA, or the World Bank. AI was used in data analysis. 웃 The text of the paper was entirely written by humans. Author order was randomized using the AEA Author Randomization Tool (DM7_byAuOnMz).

1 Introduction

Thanks to rapid economic growth, most children in South Asia can expect to have higher lifetime living standards than their parents. Movement up the socioeconomic ladder in *relative* terms is a different matter: whether a child born into a family near the bottom of the distribution can expect to reach a higher rank among her own generation than her parents held in theirs. This kind of upward mobility is less certain than absolute increase in living standards, and it plays an important role in subjective well-being and in perceptions of a society's fairness. South Asia is notable for low rates of upward mobility and gender-unequal labor market outcomes (Asher et al., 2024; Jayachandran, 2021; Narayan et al., 2018; Fletcher et al., 2017; Emran and Shilpi, 2011). Given the central role of urbanization in development, it is natural to ask whether cities alter either of these patterns—whether they open pathways for children from disadvantaged families, and whether they do so differently for men and women.

In this paper, we examine the relationship between urbanization, gender and upward mobility. We show that South Asian cities are islands of upward educational mobility, and disproportionately so for women. We describe this female urban mobility advantage and examine several candidate mechanisms for it.

To measure upward mobility in South Asia, we use demographic, income and consumption data from 30 living standards surveys conducted in Bangladesh, India, Nepal, Pakistan, and Sri Lanka, covering cohorts born since 1980. Measuring intergenerational mobility requires linking each child's socioeconomic status to that of their parents. We proxy socioeconomic status with education, which is typically the best available measure of individual lifetime income in lower-income countries.[1]

Our primary mobility measure is *bottom half mobility*, which describes the average education rank of a child born to a father in the bottom half of the education distribution. This is a good measure of mobility because it isolates children's movement in the relative socioeconomic status distribution, and is not mechanically related to inequality or growth. Given that education ranks are measured coarsely (since education levels are categorical), we use the partial identification method from Asher et al. (2024) to measure bottom half mobility, and use parent-child education rank regressions for ro-

[1]At the same time, educational attainment does not translate mechanically into employment: India, in particular, has high unemployment among educated youth (International Labour Organization, 2024).

bustness.[2] Given substantial gender segregation in South Asia in both household roles and jobs, we measure upward mobility in terms of education ranks of men and women relative to others in their same cohort and gender.

We first show that upward mobility in South Asia is systematically low by global standards, consistent with the findings of Narayan et al. (2018) and van der Weide et al. (2024). A child born to a father in the bottom half in South Asia on average attains the 37th percentile; comparison values are 42 in the United States and 46 in Denmark. The variation across countries is substantial; upward mobility is the lowest in India (36) and the highest in Sri Lanka (44). There is little cross-country correlation between income per capita and upward mobility, reinforcing the conceptual difference between these measures.

Upward mobility in cities is systematically higher than in rural areas. In South Asian cities, the average child of bottom-half parents attains approximately the 44th percentile, compared with the 35th for children in villages. This result stands in notable contrast to the United States, where cities tend to have lower upward mobility than rural areas (Chetty et al., 2014a). Because a national urban-rural gap could reflect a premium concentrated in a few large or unusually urbanized states, we also estimate bottom half mobility separately for the urban and rural areas of every subnational region in the sample (states in India, provinces in Pakistan, Nepal, and Sri Lanka, and divisions in Bangladesh). The urban premium is widespread: about 94% of South Asians live in subnational regions where children of bottom-half parents fare better in cities than in villages.

The upward mobility premium of cities is driven disproportionately by rising opportunity for women. Men in cities have approximately 6 rank points higher upward mobility than men in villages (42 vs 36), while women in cities experience an approximately 12-rank-point premium (46 vs 34). We refer to the difference between these two within-gender premia as the female urban mobility advantage, or FUMA. The FUMA exists in subnational regions representing 80% of the South Asian population.

Our results are descriptive and do not isolate the causal effects of cities. When we

[2] The canonical regression coefficient from a regression of child education on parent education is a combined measure of growth, inequality, and relative mobility. Bottom half mobility has a similar interpretation to *absolute upward mobility* from Chetty et al. (2014a), which is the average outcome of a child who grows up in a 25th percentile household.

observe children doing well in cities, it may be because cities give them better opportunities, or because the families that moved to cities would have had more upwardly mobile children even if they had stayed in rural areas. Two considerations suggest that selection is unlikely to account for our main findings. First, the literature on the causal effects of neighborhoods finds—across a wide range of high- and low-income contexts—that descriptive differences in upward mobility across places have a substantial causal component (Katz, 2026; Chetty and Hendren, 2018; Alesina et al., 2021; Milsom, 2023). Second, and more directly relevant to the female urban mobility advantage, selection would have to operate differently for boys and girls to explain our results. The young people in our sample who moved to cities would mostly have done so with their families, and such moves affect the urban status of boys and girls equally; differential migration is therefore unlikely to explain why the urban premium is so much larger for daughters than for sons.[3]

Why do women experience so much higher mobility in cities, in many cases exceeding that of men? We examine three mechanisms. First, cities have higher returns to education, which could create more upward pathways for talented children born into poor families. Second, cities have different and more heterogeneous gender norms, which could again make it easier for women from poor families to sort into work and educational opportunities based on their abilities (World Bank, 2022; Field et al., 2026). Third, income levels (for both parents and children) are higher in cities, and higher incomes could in turn lead to more investment in girls relative to boys, either closing or reversing the traditional gender gap.

We find evidence supporting the first two mechanisms and rejecting the third. Cities have higher Mincerian returns to education than rural areas across our sample; the urban returns-to-education premium is higher for women than for men in regions representing 89% of the sample population. We show further that subnational gender-specific upward mobility is correlated with gender-specific returns to education, and female upward mobility is correlated with the marriage market returns to education. Education appears to offer more of a pathway to opportunity in cities than it does in villages, and particularly so for women.

[3] There is little in the literature to suggest that child gender is a major factor driving a move, or that young boys or girls are more likely to be left behind at a level meaningful enough to affect our results. The only household survey in our sample with a migration module was the India survey; 2.99% of urban households had arrived at their current residence in the last five years, over half of which moved from other urban places.

Turning to gender norms, we use data from the Demographic and Health Surveys to show that gender norms are less patriarchal in cities than in rural areas in every country with norms data. In the subnational data, we show that women have higher mobility in places with less patriarchal norms; men also have more mobility in these regions, but the relationship is weaker for men than for women.

By contrast, the income differences between cities and villages do little to explain the FUMA. Higher-income households do invest more in education in both rural and urban areas; the gradient favors women, but too little to explain virtually any of the FUMA.

It is important to note that factors that raise education for all women (like high returns to education and female-friendly norms) may not directly affect upward mobility, because upward mobility implies moving up in rank terms rather than in levels. If these factors equally improved opportunities for all women, we could see a parallel gain in the *level* of socioeconomic outcomes for all women, with few changes in upward mobility.[4] Rising upward mobility implies that women from poorer families are doing relatively better than women from richer families. For each mechanism, we therefore ask why its benefits would accrue disproportionately to girls from less advantaged families.

For returns to education, we show descriptive evidence consistent with poorer families being more responsive to regional returns to education. Regressing school completion on state-level returns to education separately by household expenditure decile, we find that higher returns are most strongly associated with primary and middle school completion among daughters in the poorest households; there is no such relationship for sons. Girls from poor families are the ones whose schooling responds when education pays more, as it does in cities.

For social norms, South Asia's low female labor force participation (FLFP) rate may play a role. In much of South Asia, cultural norms against women's work mean that FLFP declines at high levels of income and education (Klasen and Pieters, 2015). Paradoxically, this may result in better opportunities for women from lower social classes. When new female-friendly work emerges, women from better-off families may not compete for new jobs due to social norms, which allows women from poorer households—who face fewer restrictive norms against work—to obtain those jobs. Indeed, we show

[4]Indeed, this kind of level shift in economic outcomes describes the change in India's overall education distribution in the last thirty years: better outcomes for all, but little aggregate change in overall upward mobility (Asher et al., 2024).

that the female urban mobility advantage is higher in subnational regions where the FLFP-education gradient is most negative.

There is a broad literature on the changing landscape of access to opportunity in developing countries (Page and Pande, 2018; Assouad et al., 2018; Chancel and Piketty, 2019). Early studies of intergenerational mobility have largely focused on rich countries due to data constraints (Solon, 1999; Chetty et al., 2014b; Bratberg et al., 2015). There is growing evidence that intergenerational mobility is systematically lower in lower-income countries (Azam and Bhatt, 2015; Neidhöfer et al., 2018; Narayan et al., 2018; Alesina et al., 2021; Asher et al., 2024; Genicot et al., 2025), but little evidence on heterogeneity or change over time, in large part due to data limitations. As noted above, U.S. cities have an upward mobility *disadvantage* (Chetty et al., 2014a), while African cities have a small upward mobility premium (Alesina et al., 2021).[5] We also contribute to a wide literature on the central role of cities in economic development and individual opportunity in LMICs (Iversen et al., 2017; Yamamoto et al., 2019; Cheema and Naseer, 2013; Deshpande, 2007).

The literature has documented many channels through which cities could influence men's and women's pathways to upward mobility differently. Industry and labor market structure in cities can result in more demand for female workers (Ngai and Petrongolo, 2017; Jensen, 2012; Heath and Mobarak, 2015). Cities have different public services and could give families access to better schools, with unclear effects on education gender gaps. Schools may be closer to home, but cities also pose particular safety challenges for women which can disproportionately limit women's opportunities (Borker, 2021; Kondylis et al., 2025; Amaral et al., 2025). Cities have lower female labor participation than villages (Klasen and Pieters, 2015; Peters et al., 2025), which is interesting in light of our finding that cities have higher returns to education for women.

Outside of labor markets, there are myriad lifestyle differences facing women in cities, along with exposure to different cultural norms (Tacoli and Satterthwaite, 2013; Dhamija et al., 2025). Related to our work, Munshi and Rosenzweig (2006) argue that lower-caste boys in cities are channeled into traditional occupations (via local language schools), while lower-caste girls—without the existing network of job opportunities—are more likely to attend English-language schools, giving them more opportunities in the mod-

[5] Alesina et al. (2021) use a measure of upward mobility which jointly describes average growth in educational outcomes along with changes in the relative status distribution, and is thus not directly comparable to our measure.

ern economy. Emran and Shilpi (2015) find that intergenerational mobility in India was unchanged from survey years 1991–2006, with the notable exception of rising mobility for lower-caste women in cities. There is a related literature on urban-rural differences in gender gaps in richer countries; gender gaps in wages and labor force participation rates are smaller in cities in both the U.S. and the U.K. (Phimister, 2005; Bacolod, 2017; Rosenthal-Kay and Wroblewski, 2025).

2 Context

South Asia is home to a quarter of the world's population and a third of the world's extreme poor; it is one of the regions with the lowest intergenerational mobility in the world (Narayan et al., 2018; World Bank, 2020). Our study sample covers (in order of population) India, Pakistan, Bangladesh, Nepal, and Sri Lanka. This is a coherent region with shared political, social and economic history. All sample countries but Nepal were British colonies, and Nepal itself was under strong British influence. These were among the poorest countries in the world in the 1960s and 70s. Since then, their growth histories have diverged substantially, and they now span a GDP per capita range from USD 5,746 (Nepal, 2024) to USD 15,701 (Sri Lanka, 2024). They have also diverged in terms of the roles of women; FLFP ranges from 24% in Pakistan to 39% in Bangladesh (World Bank, 2026). South Asia as a whole has urbanized in recent decades, but the extent of this process is still disputed and depends on definitional choices.

Caste has played an important historical role across the South Asian region. The caste system is a set of institutions that enforce social sanctions against occupational mobility and marriage outside of one's caste, which could be expected to work strongly against upward mobility. These social sanctions have diminished with modernization and are legally prohibited in all sample countries, though in many regions the old social norms still bind. Many of the sample countries have government policies in place intended to create pathways to upward mobility for the poor, as well as for specific marginalized groups.[6] A substantial literature has described the economic disparities between people of different castes, ethnicities, religions, and genders throughout the region, with most existing work on India (De Kruijk and Naseem, 1986; Ito, 2009; Hnatkovska et al., 2012, 2013; Asher et al., 2024; Heath and Jayachandran, 2018; Wodon, 2000; Wagle, 2010;

[6]These include programs targeting impoverished regions in Bangladesh and Sri Lanka, marginalized caste groups in India and Nepal, and women in all sample countries.

Gellner, 2007; Jayasinghe, 2019).

3 Methods: Measuring Intergenerational Mobility

Our focus is on intergenerational mobility, or more specifically, the persistence of the socioeconomic status ordering across generations. Our primary measure describes the expected adult SES percentile of a child growing up in a household in the bottom half of the SES distribution. As measured in this paper, intergenerational mobility is distinct from average growth in living standards and changes in inequality, each of which is important for well-being but which have been studied elsewhere. Individuals' prospects of moving to different social strata from their parents can affect their subjective well-being, their perceptions of the returns to effort, and their perceptions of the legitimacy of the political order (Nikolaev and Burns, 2014; Bénabou and Tirole, 2006; Alesina et al., 2018).[7]

We follow a measurement approach established in Asher et al. (2024) on intergenerational mobility in India; we summarize the motivation and approach here, but more details can be found in that paper.

3.1 Measuring Upward Educational Mobility in LMICs

We use an individual's education rank as a proxy for their socioeconomic status rank. In LMICs, education is a strong proxy for living standards, and may be a better proxy for lifetime income than a single transitory income measure (Güell et al., 2015; Card et al., 2022; Derenoncourt, 2022; Alesina et al., 2021). It also sidesteps the challenge of ascribing income to an individual in a household with joint production. A limitation of education as a proxy for living standards is that it is reported in discrete categories (whether levels or years), such that continuous ranks are not observed. This is a particular problem in LMIC settings where over half of people in older generations report zero years of formal education; we address this challenge below.

Our primary measure is *bottom half mobility*, which is the expected adult SES rank of a child born to a household in the bottom half of the SES distribution. In a society with zero upward mobility, the children of the poor remain poor with certainty, and

[7]The relative extent to which people view low growth and living standards, high inequality, and low upward mobility as important social problems remains an interesting research question.

bottom half mobility is 25. In a society with perfect mobility, children's outcomes have no correlation with those of their parents and bottom half mobility is 50. The measure is a close analog of *absolute upward mobility* (Chetty et al., 2014a), which is the expected income rank of a child born in the 25th percentile; as we show below, absolute upward mobility is more difficult to measure with categorical education data than bottom half mobility. The key advantages of *bottom half mobility* relative to other mobility measures are that (i) it has an intuitive interpretation, (ii) it can be easily compared across contexts, and (iii) it is not mechanically related to either economic growth or inequality and thus isolates relative changes in rank.

To illustrate the challenge posed by the categorical nature of education, consider the sample transition matrix for father-son pairs for individuals born between 1981–1990 in Pakistan (Appendix Table B1). 47% of fathers report less than two years of education. What is the expected child outcome of a father at the 25th SES percentile? As demonstrated in Asher et al. (2024), we can treat this as an interval-censoring problem, where the observed education category is an interval-censored measure of latent education rank. With only the assumption of monotonicity (on average, more educated parents have more educated children in expectation), we can *bound* moments of the child distribution conditional on the father education level.[8]

Let μ_a^b be the expected child rank given parents in SES rank range a, b. Because of the wide bins at the bottom of the education distribution, expected outcomes for children at the very bottom have very wide bounds. For the 1981–1990 cohort in Pakistan, using the transition matrix above, we calculate $\mu_0^{20} \in [26.8, 37.2]$, bounds which are quite wide and uninformative. For the same cohort, we can calculate $\mu_0^{50} \in [37.4, 37.7]$. These bounds are smaller, because there is an education bin close to the 50th percentile. In the limit, if an education category exactly lines up with 50% of fathers, the bounds collapse and μ_0^{50} can be point-estimated. This example illustrates why we use bottom half mobility (μ_0^{50}) as a primary mobility measure. In Appendix B, we show a step-by-

[8] We can think of the latent education rank as describing how close an individual is to the margin of receiving more or less education. For example, a father who almost completed a year of primary school would have a higher latent rank than someone who didn't even start. This problem would not arise with quantile transition matrices, but it is non-trivial to produce quantile transition matrices from education data because of the same interval-censoring problem. Researchers occasionally try to resolve this problem by randomly assigning parents and children within bins, but this produces biased results (Asher et al., 2024). For example, it would imply in Pakistan that children with parents in SES percentiles 0–20 have the same expected outcomes as those with parents in SES percentiles 20–40, which is unlikely.

step example demonstrating how these bounds are calculated.

While the bounds on bottom half mobility are tight, they are inconvenient to use in regression specifications. As such, we also approximate bottom half mobility by cutting the parent education distribution as close to 50% as is possible in the categorical data, and then calculate mean child ranks in that bin. This approximation works best when there is a bin boundary close to 50%, which is usually the case. In the example from Pakistan, this measure gives us the mean child outcome among the bottom 52% of fathers in the 1981–1990 cohort (combining the two lowest father bins), and among the bottom 49% of fathers in the 1990s cohort.

For robustness, we also use the canonical rank-rank mobility estimator — the coefficient from a regression of child education rank on father education rank. A higher coefficient in this regression implies that child outcomes depend more on father outcomes, and thus intergenerational mobility is lower. These regressions require continuous ranks, so we use the midpoint rank of each education bin; as such, the standard errors in these robustness tests do not account for the loss of information from assigning the same education rank to all individuals in the same education bin.

In all cases, we rank individuals against others with the same gender in their birth cohort. This approach is justified by the highly distinct labor market experiences of men and women in much of South Asia. The measure of upward mobility for daughters thus indicates how well daughters from poor families are likely to do as adults, relative to daughters from better-off families in the same country and cohort. A level shift in female education affecting all students equally does not affect this measure of upward mobility, even if all women are now doing better relative to men.

In all regressions, we multiply survey weights by country population in the median survey year, so that the pooled regressions are representative of South Asia; India and Pakistan thus affect the pooled results more than Sri Lanka or Nepal.

4 Data

4.1 Household Surveys

Our primary data sources are thirty national household survey rounds from Pakistan, India, Bangladesh, Sri Lanka, and Nepal. Each of these surveys provides a household roster module with age, gender, and education for all household members. Appendix Table A1 lists the surveys used.

To construct intergenerational education mobility measures, we require matched parent-child education attainment. In India and Nepal, respondents are directly asked their parents' education levels, giving us a parent-child education pair for every respondent with non-missing data.

In Bangladesh, Sri Lanka and Pakistan we can link parents and children only when they live in the same household. This could bias our estimates if upwardly mobile children have different probabilities of exiting the household in rich and poor families.[9] We address this problem by restricting the data to an age window where children are old enough to show divergence in educational outcomes, but young enough to be found in the household with high probability.

Appendix Figure A1 shows coresidence and completion rates of different schooling levels, by age, in the three countries where we use coresident parent-child pairs. From these graphs, we can identify age bands where a given schooling level (middle or high school) is completed, while children still have a high rate of coresidence, which mitigates the bias from not observing non-coresident children. This becomes more of a challenge at higher levels of education, and particularly for daughters, who leave home at earlier ages. Our primary analysis restricts the data to these age bands, and top-codes education at middle or high school level as appropriate.[10] Since girls' coresidence declines at an earlier age than boys, the primary analysis top-codes daughters at middle school and sons at high school. The selected age groups are indicated by the gray bars in Appendix Figure A1 and reported in Appendix Table A2. All results are robust to using the boys' age windows for both sons and daughters and for making different choices around parent-child coresidence in the different samples.

[9] The direction of bias is not theoretically obvious and we are not aware of a study on the relationship between completed years of education and time of leaving home in rich vs. poor households. Emran et al. (2018) discuss the aggregate bias from estimating mobility using coresident child data, and conclude that the parent-child education correlation is a more robust measure than the regression coefficient, when working with samples of coresident parents and children. The rank-rank regression coefficient that we use below is analogous to the correlation in imposing a common outcome variance for the parent and child distribution.

[10] This means that dynamics of differential access to college are not reflected in our measure. Since so few children from bottom-half families attend college, this is unlikely to bias estimates much. We show robustness to estimates that incorporate college completion using older children; however, these are necessarily restricted to the subset of older children still living with parents.

Our primary estimates focus on father-child pairs. Bottom half mobility is estimated with less precision for mother-child pairs, because mothers are much more likely to be bottom-coded, due to older generation women having less education. In Pakistan, 74% of mothers are in the lowest education bin, so the mother-child bounds on bottom half mobility are considerably wider than for father-child pairs.

For subnational analysis, we group data into either subnational regions (states and union territories in India, divisions in Bangladesh, and provinces in Nepal, Sri Lanka and Pakistan) or subnational regions x urban/rural cells. We describe subnational regions below as states. Our final analysis sample comprises about 200,000 father-son pairs, and 150,000 father-daughter pairs across the South Asian region. Appendix Table A3 disaggregates the sample by country.

4.2 Labor Force Surveys

To estimate Mincerian returns to education, we draw on labor force surveys from the World Bank's Global Labor Database (GLD), which provides harmonized surveys for Bangladesh, India, Nepal, Pakistan and Sri Lanka.

4.3 Data on Gender Norms

We build subnational measures of gender norms using the Demographic and Health Surveys (DHS), focusing on four dimensions of women's autonomy: (i) agency for decisions; (ii) attitudes toward domestic violence; (iii) reproductive agency; and (iv) son preference. These data are available for all countries in the sample except Sri Lanka.

In each domain, we take the set of questions that are harmonized across the four countries and take a mean of the standardized measures. We then build a single norms index by taking the mean of the four indices. We combine these four dimensions into a composite index of gender norms at the state-urban/rural level.

5 Results

5.1 Mobility, Gender, and Urbanization: Descriptive Results

Table 1 presents summary statistics for the five-country sample. In every sample country, children are substantially more educated than their parents (Panel A). The gender gap in educational attainment favors sons by at least a year in all five countries.

Panel B shows estimates of bottom half mobility in each country, by gender and rurality. In the combined South Asia sample, sons and daughters have similar upward mobility (37.8 and 36.9, respectively), but this similarity hides substantial urban-rural differences. Upward mobility is higher in cities for both sons and daughters, but much more so for daughters. Conditional on growing up in bottom-half families, sons in cities attain a 5.4-point higher education rank than sons in villages; for daughters, this figure is a notable 11.8 rank points. The difference between these two numbers is the female urban mobility advantage, or FUMA, of 6.4.

The female urban mobility advantage comes from the combination of a 2.2 point mobility disadvantage for rural girls and a 4.3 point mobility advantage for urban girls. In cities, daughters of less educated fathers are less constrained by their humble upbringings as compared with sons, and as compared with daughters from similarly-educated fathers in villages. Daughters have higher upward mobility in cities than in villages in raw levels, and have a larger urban premium than sons, in four out of five countries in the sample, with Sri Lanka the exception.

Figure 1 shows the urban mobility premia disaggregated by gender and country. The overall FUMA result is driven by India and Pakistan, where daughters experience a 13-rank-point urban premium, compared with 6- and 5-rank-point premia for sons, respectively. The FUMA is smaller in Bangladesh and Nepal, and negative in Sri Lanka (where girls have much higher upward mobility than boys in both rural and urban places).[11,12]

The rest of this paper is focused on understanding the substantial female urban mobility advantage in South Asia.

[11]Appendix Figure A2 shows that these results are largely consistent across birth cohorts, with large FUMAs in India and Pakistan, and smaller or ambiguous FUMAs in the other sample countries. Appendix Table A4 shows that the results are robust to alternate sample selection choices regarding parent-child coresidence.

[12]Note that the definitions of urban and rural are given to us in the household surveys. The definitions in Sri Lanka appear to misreport many urban areas as rural, following a local government reform in 1987 that pooled a large number of rural and urban areas and classified them as rural. In part, due to this change, Sri Lanka's official urbanization level fell from 21.5% in 1981 to 14.6% in 2001 (World Bank, 2015). FUMA estimates will always depend on how urban and rural areas are defined, but the comparability is particularly suspect in Sri Lanka.

5.2 Subnational robustness of the female urban mobility advantage

Table 2 shows the female urban mobility advantage in a regression setting. In columns 1–3, we restrict the sample to the set of fathers with below-median education and run a pooled regression of child education rank on an urban indicator.[13] Without covariates, the constant in this regression describes the average national education rank of a child growing up in a bottom-half household. The average rural child from a bottom-half family attains the 35th education percentile in South Asia. This is low by international standards; benchmark values are 42 in the United States and 46 in Denmark.

In urban areas, the average bottom-half child attains 9.0 additional rank points, a substantial and highly statistically significant difference. The urban premium is primarily driven by daughters, whose expected education rank is 13 points higher in cities, compared with a 5-rank-point premium for sons. Column 4 estimates the same result in an interaction.

Table 3 demonstrates the female urban mobility advantage with the "regression coefficient" approach used in traditional studies of intergenerational mobility. We regress the child education rank on the parent rank; higher regression coefficients indicate that child outcomes depend more heavily on parent outcomes and that intergenerational mobility is lower. The triple interaction coefficient in Column 1—female x urban x father education rank—is negative, substantial and statistically significant. It shows that, relative to sons, daughter education depends much less on father education in urban places than in rural places. Columns 2 and 3 estimate the urban mobility premium separately for sons and daughters. Columns 4 and 5 add controls for state, cohort, and household consumption, which barely move the estimated advantage, showing that the pooled result is not driven by area correlations between child outcomes and urbanization, or by the fact that richer dynasties live in cities.[14]

The female urban mobility advantage is not driven by a few large locations. We cal-

[13]As noted above, since education is binned, the samples cannot be split to precisely capture the bottom 50% of parents; we choose the closest cut-point to 50%. This was 50% (Bangladesh), 50% (India), 48% (Nepal), 49% (Pakistan), and 50% (Sri Lanka).

[14]Appendix Tables A5 and A6 show analogous regression estimates by country. As above, the female urban mobility advantage is largest in India and Pakistan, smaller in Nepal and Bangladesh, and absent or negative in Sri Lanka. Appendix Table A7 shows that results are robust to alternate top-coding choices.

culate bottom half mobility for every gender x state x urban/rural cell, and then take differences to obtain the state-level urban premia for sons and daughters, and the state-level FUMA.[15] Figure 2 plots the cumulative distribution functions (CDFs) of the state-level urban premia for daughters and for sons.[16] The daughter CDF stochastically dominates the son CDF and the gap between them is large. At any threshold level of urban mobility premium chosen, there are more daughters than sons experiencing an urban premium at least that high. In the population-weighted median state, daughters of bottom-half fathers in cities can expect to end up 8.6 rank points higher than those in villages; for sons, the median urban premium is 3.2 points.[17]

Figure 3 plots the female urban mobility premium against the male urban mobility premium in every state. States with a female urban mobility advantage—where daughters disproportionately benefit in cities—are above the 45 degree line. We observe a female urban mobility advantage in states representing 80% of the South Asian population.

6 Mechanisms

In this section, we examine three mechanisms that could potentially explain the female urban mobility advantage in South Asia: (i) cities may have higher relative returns to education for women; (ii) cities may have social norms more favorable to female work and education; and (iii) cities have higher income and consumption than rural areas, which could motivate parental investment in female education. To account for the FUMA, each mechanism would not only need to lead cities to have better educational opportunities for women, but for those opportunities to disproportionately be taken up by bottom-half women, allowing them to move up in the rank distribution.

We find evidence linking the first two mechanisms to the FUMA, but the third has little explanatory power. The results in this section are descriptive; they are consistent with an important role for returns to education and social norms in explaining the FUMA, but we do not rule out other explanations that could be correlated with these factors.

[15] We continue to use national within-gender education ranks here and for all subsequent analyses.

[16] The CDF is weighted by state population, so the vertical steps reflect state size.

[17] State-level premia compare urban and rural children within the same state, whereas the country-level premia in Table 1 compare urban and rural children across the whole country; the two need not coincide, because states have different urban and rural populations, and this analysis excludes a handful of fully urban states.

6.1 Returns to Education

In this section, we show that: (i) Mincerian returns to education in cities favor women over men, and more so than they do in villages; (ii) state × rural/urban cells with higher returns to education have higher upward mobility, and the relationship is gender-specific: women's returns to education are specifically correlated with women's upward mobility; (iii) the same result holds even more strongly in marriage markets, motivating more educational investment in girls even if they are not expected to work outside the household; and (iv) subnational higher returns to education are especially correlated with education outcomes for daughters in bottom-half families.

Table 4 presents estimates of Mincerian returns to education in the full sample, in the form of a regression of log wages on years of education, with age and country-year fixed effects. Column 1 reports the pooled return: each additional year of schooling is associated with 8% higher wages. Column 2 shows the aggregate return to education is 1.5 percentage points higher for women, and Column 3 shows that this higher women's return is driven almost entirely by women in cities. The urban return-to-education premium is about twice as high for women as it is for men.[18]

Female wage returns to education cannot explain the whole story, since many women in South Asia do not work outside the home. In Columns 4 and 5 of Table 4, we therefore estimate the marriage-market returns to education, from a regression of the husband's log wage on the wife's years of schooling, in the sample of married women with wage-earning husbands. This measure of the marriage market return to female education is twice as high in cities as it is in villages, and is almost identical to the own-wage premium estimated in Column (3). While these Mincerian returns may not be causal, they are consistent with a model where investing in a daughter's education yields a higher economic payoff (in both labor and marriage markets) in cities than in villages, giving parents a direct incentive to prioritize daughters' schooling in urban areas.

Figure 4 shows that gender-specific upward mobility is correlated with gender-specific returns to education, using variation across the state × urban/rural cells in our sample.

[18] One candidate explanation for the higher female premium is that high-skill jobs in occupations more often held by women are concentrated in cities. Prior research suggests female comparative advantage in services and sectors requiring social skills (Ngai and Petrongolo, 2017; Petrongolo and Ronchi, 2020; Rendall, 2024; Cortes et al., 2018).

Panel (a) shows that daughters on average have higher upward mobility in places where women have higher returns to education. Panel (b) shows that the same effect holds but with a smaller magnitude for men and male upward mobility. This effect is magnified by the fact that the distributions of subnational returns to education are characterized by higher returns for women overall. Panel (c) shows the same test as Panel (a), but using the marriage market return to education above; the slope is 68% steeper than the women's own-wage returns to education. Panel (d) is a placebo test: the relationship between male bottom half mobility and the marriage market returns to female education. The slope is positive but much smaller than the slope in Panel (c), suggesting that a large share of the effect in Panel (c) is gender-specific.

For returns to education to generate the female urban mobility advantage, daughters of less advantaged families must respond more strongly to high returns than daughters of more advantaged families. Figure 5 shows that they do. We regress individual school completion on subnational returns to education, separately for individuals in each decile of the household per capita expenditure distribution. The education response is concentrated among poor daughters. For sons, there is no such relationship at any point in the expenditure distribution. The high returns to female education in cities thus appear to move schooling where it matters for mobility.

6.2 Social Norms

If cities are characterized by less strict patriarchal norms against women's education and labor force participation, this could increase female educational attainment. Whether this affects female upward mobility depends on whether low- or high-status families respond more to the different norm environment. We show here that: (i) social norms are more gender-equal in cities; and (ii) at the state level, the female urban mobility advantage is correlated with the size of urban-rural norm gaps.

Figure 6 shows the average value of the gender equality index in urban and rural areas of each country. Cities have more gender-equal norms than villages in every country in the sample.[19] Panels A and B of Figure 7 plot bottom half mobility in each state $\times$ urban/rural cell against that cell's gender norm index, with country fixed effects. Panels C and D show the corresponding binscatters for women and men.

[19] All analysis of social norms excludes Sri Lanka, for which we do not have state-level gender norms data.

For women, the relationship is significant and positive: in states with more gender-equal norms, daughters have substantially more upward mobility. For men, the slope is positive but much flatter. Were this simply general development—richer states having both less patriarchal norms and higher access to opportunity for everyone—then the two relationships would be similar.

Table 5 presents state $\times$ urban/rural cell regressions showing that this gender difference holds up under different fixed effect specifications. Columns 5 and 6 in particular include state fixed effects and thus exploit only within-state rural/urban variation. In each case, the coefficient on social norms is at least 3 times higher for daughters' upward mobility than for sons'. The point estimates are economically important. In Pakistan, where the urban/rural norm gap is largest (1 standard deviation, Figure 6), applying the Column 6 estimate implies a roughly 10-rank-point female mobility difference, which could fully explain Pakistan's 8.2-rank-point female urban mobility advantage from Table 1.

6.2.1 Status-selective female labor supply

Less patriarchal norms can improve women's outcomes without necessarily increasing relative mobility: if women from every class benefit equally, the own-gender education distribution could shift upward with no corresponding change in ranks. A rise in upward mobility implies that new opportunities in cities are particularly accessible to women from less privileged backgrounds. While more economically advantaged women might have more resources enabling them to seize new opportunities, in fact the urban female labor force participation rate is declining in individual socioeconomic status (Goldin, 1995; Jayachandran, 2021). This could create a window of opportunity for less privileged women.

To test this mechanism, we examine how the female urban mobility advantage is related to female labor force participation among higher-education women. Using variation across subnational urban regions, Figure 8 shows that the FUMA is largest in places where tertiary-educated women have the lowest FLFP (Panel A), as well as where the FLFP gap between high- and low-education women is largest (Panel B).[20] These results are consistent with a story where new female-friendly work in cities is more attainable by women from less privileged backgrounds in part because more privileged women

[20] Appendix Figure A3 shows the same analysis using high school as the high education threshold. The FUMA is again larger where high school-educated women are not working (Panel A), but here, the high-/low-education gap is only weakly predictive in the same direction.

have a low rate of labor market participation.

6.3 Higher Consumption in Cities

Can the female urban mobility advantage be explained by higher income and consumption levels in cities? If daughters' education is a normal good, but is valued less than sons' education, then higher income could result in disproportionate gains for daughters. We show evidence here that urban-rural consumption gaps do not have any explanatory power over the FUMA.

We present two pieces of evidence. First, Column 5 in Table 3 takes the father-child rank-rank regression and adds household log per capita consumption as a control. Household consumption is associated with higher child rank, but the interaction with the daughter indicator is null. If household consumption was a major mediator of the FUMA, we would expect a negative coefficient on the interaction term and a change in the uninteracted FUMA estimate; we see neither.

Second, we ask how much of the FUMA can be generated by urban–rural differences in household consumption alone. We get predicted values for bottom-half son and daughter education ranks from a polynomial of household consumption, without using the urban/rural indicator. These predict lower education ranks for rural sons and daughters, because rural households are poorer. We can then calculate predicted FUMA values from these estimates, which are driven entirely by rural-urban consumption differences. The actual and predicted FUMAs are shown in Table 6. The predicted FUMAs are small in magnitude and centered around zero, reflecting the earlier fact that consumption is not associated with changes in education gender gaps in bottom-half households.

6.4 How much of the female urban mobility advantage is explained by the mechanisms?

The previous three subsections presented evidence on each mechanism separately. We now use a single regression framework to examine the extent that our measures of the candidate mechanisms can explain differences in the FUMA. Using the specification and bottom-half parent sample from Table 2, we regress child education on urban and female indicators and their interaction, and then include (i) the household's national per capita expenditure rank; (ii) the returns to education in the state × rural/urban × gender cell; and (iii) the state × rural/urban gender norms index. As above, the Urban × Female coefficient is the regression analog of the FUMA: the difference between daughters' and sons' urban mobility premia.

The results are in Table 7. Column 1 shows the baseline FUMA of 7.4 rank points. Columns 2–4 introduce each mechanism separately, both as a main effect and interacted with the female indicator. Household expenditure fully explains away the male urban premium (as the urban coefficient falls from 5.2 to 0.8), but has no effect on the FUMA. The returns to education measure fully explains the FUMA, while the norms index explains 39% of the FUMA.[21]

All three mechanisms together explain 90% of the FUMA, suggesting that the effects of the mechanisms are not independent. For example, returns to education for women may be higher in cities in part because of their different cultural environment. Needless to say, these are descriptive attenuation estimates and more evidence would be needed to interpret them causally. They could be proxying for other differences between cities and villages that are correlated with the mechanism variables.[22]

7 Conclusion

This paper documents a stylized fact in South Asia: upward educational mobility is higher in cities than in the countryside, and this urban mobility premium accrues disproportionately to women. Across a substantial majority of South Asia, cities are places where women from lower-class households have opportunities to rise in the relative status distribution. Exploring mechanisms for the female urban mobility advantage, we find evidence supporting higher returns to education in labor and marriage markets in cities, and the less patriarchal gender norms in cities. The higher income levels of cities explain little on their own.

Structural transformation is inseparable from development: as economies develop, people move from farms to cities, and the terms on which they are absorbed there shape

[21] We calculate the "share explained" as the percentage change in the Urban × Female estimate when the mechanism variables are added to the specification.

[22] Appendix Table A8 repeats the same decomposition for the sons' and the daughters' urban mobility premia separately. Returns to education and consumption are correlated with both male and female upward mobility, but less patriarchal gender norms are correlated only with female upward mobility.

who gets ahead. In South Asia, cities appear to be loosening the factors that most tightly constrain poor women. Our result stands in notable contrast to the United States, where cities are associated with lower upward mobility.

Our evidence is descriptive, and does not decisively identify which features of cities make them advantageous for young women. Cities are characterized by female-friendly service work, but South Asia features one of the lowest rates of female labor participation in the world. More work is needed to understand how norms shape behavior differently in cities. Relative to villages, cities offer anonymity, mixing of social groups, and more exposure to people with different norms from one's own. It will also be useful to understand whether the female urban mobility advantage is a broad phenomenon in the developing world, or characteristic only of South Asia, with its distinct social stratification and gender norms. With rapid urbanization expected to continue, understanding what makes cities engines of opportunity and for whom remains an essential question.

References

Alesina, Alberto, Sebastian Hohmann, Elias Papaioannou, and Stelios Michalopoulos, "Intergenerational Mobility in Africa," *Econometrica*, 2021, *89* (1), 1–35.

_, Stefanie Stantcheva, and Edoardo Teso, "Intergenerational Mobility and Preferences for Redistribution," *American Economic Review*, 2018, *108* (2), 521–554.

Amaral, Sofia, Girija Borker, Nathan Fiala, Anjani Kumar, Nishith Prakash, and Maria Micaela Sviatschi, "Sexual Harassment in Public Spaces and Police Patrols: Experimental Evidence from Urban India," *The Quarterly Journal of Economics*, 2025, *140* (4), 3191–3231.

Asher, Sam, Paul Novosad, and Charlie Rafkin, "Intergenerational Mobility in India: New Measures and Estimates across Time and Social Groups," *American Economic Journal: Applied Economics*, April 2024, *16* (2), 66–98.

Assouad, Lydia, Lucas Chancel, and Marc Morgan, "Extreme Inequality: Evidence from Brazil, India, the Middle East, and South Africa," in "AEA Papers and Proceedings," Vol. 108 2018, pp. 119–23.

Azam, Mehtabul and Vipul Bhatt, "Like father, like son? Intergenerational educational mobility in India," *Demography*, 2015, *52* (6), 1929–1959.

Bacolod, Marigee, "Skills, the Gender Wage Gap, and Cities," *Journal of Regional Science*, 2017, *57* (2), 290–318.

Bénabou, Roland and Jean Tirole, "Belief in a Just World and Redistributive Politics," *The Quarterly Journal of Economics*, 2006, *121* (2), 699–746.

Borker, Girija, "Safety First: Perceived Risk of Street Harassment and Educational Choices of Women," 2021. World Bank Policy Research Working Paper No. 9731.

Bratberg, Espen, Jonathan Davis, Bhashkar Mazumder, Martin Nybom, Daniel Schnitzlein, and Kjell Vaage, "A Comparison of Intergenerational Mobility Curves in Germany, Norway, Sweden and the U.S.," *The Scandinavian Journal of Economics*, 2015, *119* (1).

Card, David, Ciprian Domnisoru, and Lowell Taylor, "The Intergenerational Transmission of Human Capital: Evidence from the Golden Age of Upward Mobility," *Journal of Labor Economics*, 2022, *40* (S1), S39–S95.

Chancel, Lucas and Thomas Piketty, "Indian Income Inequality, 1922–2015: From British Raj to Billionaire Raj?," *The Review of Income and Wealth*, 2019, *65* (S1), S33–S62.

Cheema, Ali and Muhammad Farooq Naseer, "Historical inequality and intergenerational educational mobility: The dynamics of change in rural Punjab," *The Lahore Journal of Economics*, 2013, *18* (special edition), 211–231.

Chetty, Raj and Nathaniel Hendren, "The Impacts of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects," *The Quarterly Journal of Economics*, 2018, *133* (3), 1107–1162.

_ , _ , Patrick Kline, and Emmanuel Saez, "Where is the land of opportunity? The geography of intergenerational mobility in the United States," *Quarterly Journal of Economics*, 2014, *129* (4), 1553–1623.

_ , _ , _ , _ , and Nicholas Turner, "Is the United States Still a Land of Opportunity? Recent Trends in Intergenerational Mobility," *American Economic Review: Papers & Proceedings*, 2014, *104* (5), 141–147.

Cortes, Guido Matias, Nir Jaimovich, and Henry E. Siu, "The "End of Men" and Rise of Women in the High-Skilled Labor Market," 2018. NBER Working Paper No. 24274.

Derenoncourt, Ellora, "Can you move to opportunity? Evidence from the Great Migration," *American Economic Review*, 2022, *112* (2), 369–408.

Deshpande, Ashwini, "Overlapping identities under liberalization: Gender and caste in India," *Economic Development and Cultural Change*, 2007, *55* (4), 735–760.

Dhamija, Gaurav, Punarjit Roychowdhury, and Binay Shankar, "Does Urbanization Empower Women? Evidence from India," *Journal of Population Economics*, 2025, *38* (1).

Emran, M Shahe and Forhad Shilpi, "Gender, geography, and generations: Intergenerational educational mobility in post-reform India," *World Development*, 2015, *72*, 362–380.

—, William Greene, and Forhad Shilpi, "When measure matters: Coresidency, truncation bias, and intergenerational mobility in developing countries," *Journal of Human Resources*, 2018, *53* (3), 589–607.

Emran, M.S. and F. Shilpi, "Intergenerational Occupational Mobility in Rural Economy: Evidence from Nepal and Vietnam," *Journal of Human Resources*, 2011, *46* (2).

Field, Erica M., Madeline McKelway, and Alessandra Voena, "Gender Norms and Development," 2026. NBER Working Paper No. 34832.

Fletcher, Erin K., Rohini Pande, and Charity Troyer Moore, "Women and Work in India: Descriptive Evidence and a Review of Potential Policies," 2017. HKS Working Paper No. RWP18-004.

Gellner, David N, "Caste, Ethnicity and Inequality in Nepal," *Economic and Political Weekly*, 2007, *42* (20), 1823–1828.

Genicot, Garance, Debraj Ray, and Carolina Concha-Arriagada, "Upward Mobility in Developing Countries," in Klaus F. Zimmermann, ed., *Handbook of Labor, Human Resources and Population Economics*, Springer, 2025.

Goldin, Claudia, "The U-shaped Female Labour Force Function in Economic Development and Economic History," in T. Paul Schultz, ed., *Investment in Women's Human Capital*, Chicago and London: University of Chicago Press, 1995.

Güell, Maia, José V Rodríguez Mora, and Christopher I. Telmer, "The Informational Content of Surnames, the Evolution of Intergenerational Mobility, and Assortative Mating," *Review of Economic Studies*, 2015, *82* (2), 693–735.

Heath, Rachel and A. Mushfiq Mobarak, "Manufacturing Growth and the Lives of Bangladeshi Women," *Journal of Development Economics*, 2015, *115*, 1–15.

— and Seema Jayachandran, "The Causes and Consequences of Increased Female Education and Labor Force Participation in Developing Countries," in Susan L. Averett, Laura M. Argys, and Saul D. Hoffman, eds., *The Oxford Handbook of Women and the Economy*, Oxford University Press, 2018, pp. 345–368.

Hnatkovska, Viktoria, Amartya Lahiri, and Sourabh B. Paul, "Breaking the caste barrier: intergenerational mobility in India," *The Journal of Human Resources*, 2013, *48* (2), 435–473.

_ , _ , **and Sourabh Paul**, "Castes and labor mobility," *American Economic Journal: Applied Economics*, 2012, *4* (2), 274–307.

International Labour Organization, "India Employment Report 2024: Youth Employment, Education and Skills," 2024.

Ito, Takahiro, "Caste discrimination and transaction costs in the labor market: Evidence from rural North India," *Journal of Development Economics*, 2009, *88* (2), 292–300.

Iversen, Vegard, Anirudh Krishna, and Kunal Sen, "Rags to riches? Intergenerational occupational mobility in India," *Economic and Political Weekly*, 2017, *52* (44), 107–114.

Jayachandran, Seema, "Social norms as a barrier to women's employment in developing countries," *IMF Economic Review*, 2021, *69* (3), 576–595.

Jayasinghe, Maneka, "Dynamic trends in household poverty and inequality in Sri Lanka: do gender and ethnicity matter?," *Journal of the Asia Pacific Economy*, 2019, *24* (2), 208–223.

Jensen, Robert, "Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India," *The Quarterly Journal of Economics*, 2012, *127* (2), 753–792.

Katz, Lawrence F., "Neighborhood Effects and Missing Markets for Opportunity," 2026. NBER Working Paper No. 35419.

Klasen, Stephan and Janneke Pieters, "What explains the stagnation of female labor force participation in urban India?," *The World Bank Economic Review*, 2015, *29* (3), 449–478.

Kondylis, Florence, Arianna Legovini, Kate Vyborny, Astrid Zwager, and Luiza Andrade, "Demand for "Safe Space": Avoiding Harassment and Complying with Norms," *Journal of Development Economics*, 2025, *174*, 103392.

Kruijk, Hans De and SM Naseem, "Inequality in the Four Provinces of Pakistan [with Comments]," *The Pakistan Development Review*, 1986, *25* (4), 685–706.

Milsom, Luke Heath, "Spatial inequality of opportunity in West Africa," *Journal of Public Economics*, 2023, *225*, 104944.

Munshi, Kaivan and Mark Rosenzweig, "Traditional institutions meet the modern world: Caste, gender, and schooling choice in a globalizing economy," *American Economic Review*, 2006, *96* (4), 1225–1252.

Narayan, Ambar, Roy Van der Weide, Alexandru Cojocaru, Christoph Lakner, Silvia Redaelli, Daniel Gerszon Mahler, Rakesh Gupta N Ramasubbaiah, and Stefan Thewissen, *Fair progress?: Economic mobility across generations around the world*, World Bank Publications, 2018.

Neidhöfer, Guido, Joaquín Serrano, and Leonardo Gasparini, "Educational Inequality and Intergenerational Mobility in Latin America: A New Database," *Journal of Development Economics*, 2018, *134*, 329–349.

Ngai, L. Rachel and Barbara Petrongolo, "Gender Gaps and the Rise of the Service Economy," *American Economic Journal: Macroeconomics*, 2017, *9* (4), 1–44.

Nikolaev, Boris and Ainslee Burns, "Intergenerational Mobility and Subjective Well-Being: Evidence from the General Social Survey," *Journal of Behavioral and Experimental Economics*, 2014, *53*, 82–96.

Page, Lucy and Rohini Pande, "Ending Global Poverty: Why Money isn't Enough," *Journal of Economic Perspectives*, 2018, *32* (4), 173–200.

Peters, Michael, Pamela Torola, Lindsey Uniat, and Fabrizio Zilibotti, "From Rural Fields to Urban Kitchens: Structural Change and the Decline of Women's Work in India," 2025. CEPR Discussion Paper No. 19959.

Petrongolo, Barbara and Maddalena Ronchi, "Gender Gaps and the Structure of Local Labor Markets," *Labour Economics*, 2020, *64*, 101819.

Phimister, Euan, "Urban Effects on Participation and Wages: Are There Gender Differences?," *Journal of Urban Economics*, 2005, *58* (3), 513–536.

Rendall, Michelle, "Brain versus Brawn: The Realisation of Women's Comparative Advantage," 2024. CEPR Discussion Paper No. 18825.

Rosenthal-Kay, Jordan and Caleb Wroblewski, "Sex and the city-size earnings premium," 2025. Working paper.

Solon, Gary, "Intergenerational Mobility in the Labor Market," in Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics*, Amsterdam: North Holland Press, 1999, pp. 1761–1800.

Tacoli, Cecilia and David Satterthwaite, "Gender and Urban Change," *Environment and Urbanization*, 2013, *25* (1), 3–8.

van der Weide, Roy, Christoph Lakner, Daniel Gerszon Mahler, Ambar Narayan, and Rakesh Gupta, "Intergenerational mobility around the world: A new database," *Journal of Development Economics*, 2024, *166*, 103167.

Wagle, Udaya R, "Economic inequality in Nepal: Patterns and Changes during the Late 1990s and Early 2000s," *Journal of International development*, 2010, *22* (5), 573–590.

Wodon, Quentin T, "Microdeterminants of Consumption, Poverty, Growth, and Inequality in Bangladesh," *Applied Economics*, 2000, *32* (10), 1337–1352.

World Bank, "Leveraging Urbanization in Sri Lanka," https://www.worldbank.org/en/country/srilanka/brief/leveraging-urbanization-sri-lanka September 2015. Accessed 2026-09-13.

—, *Poverty and Shared Prosperity 2020: Reversals of Fortune*, Washington, DC: World Bank, 2020.

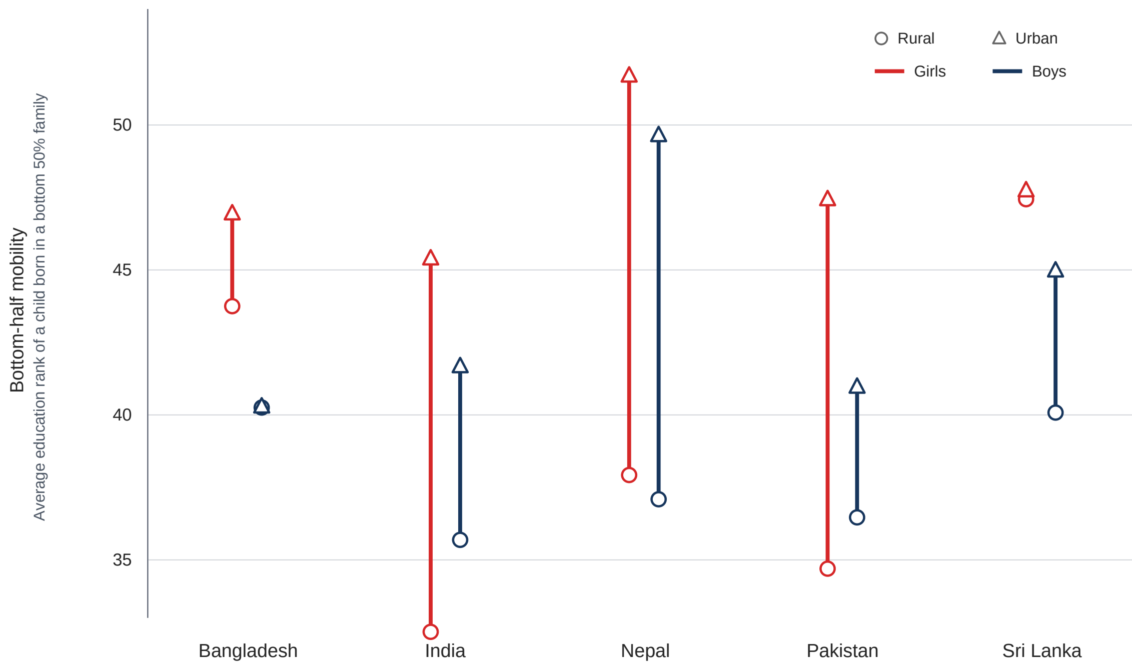
—, *South Asia Economic Focus, Spring 2022: Reshaping Norms: A New Way Forward*, Washington, DC: World Bank, 2022.

—, "World Development Indicators: Labor Force Participation Rate, Female (% of Female Population Ages 15+), Modeled ILO Estimate," 2026.

Yamamoto, Yuki, Ken'ichi Matsumoto, Keisuke Kawata, and Shinji Kaneko, "Gender-based differences in employment opportunities and wage distribution in Nepal," *Journal of Asian Economics*, 2019, *64*, 101131.

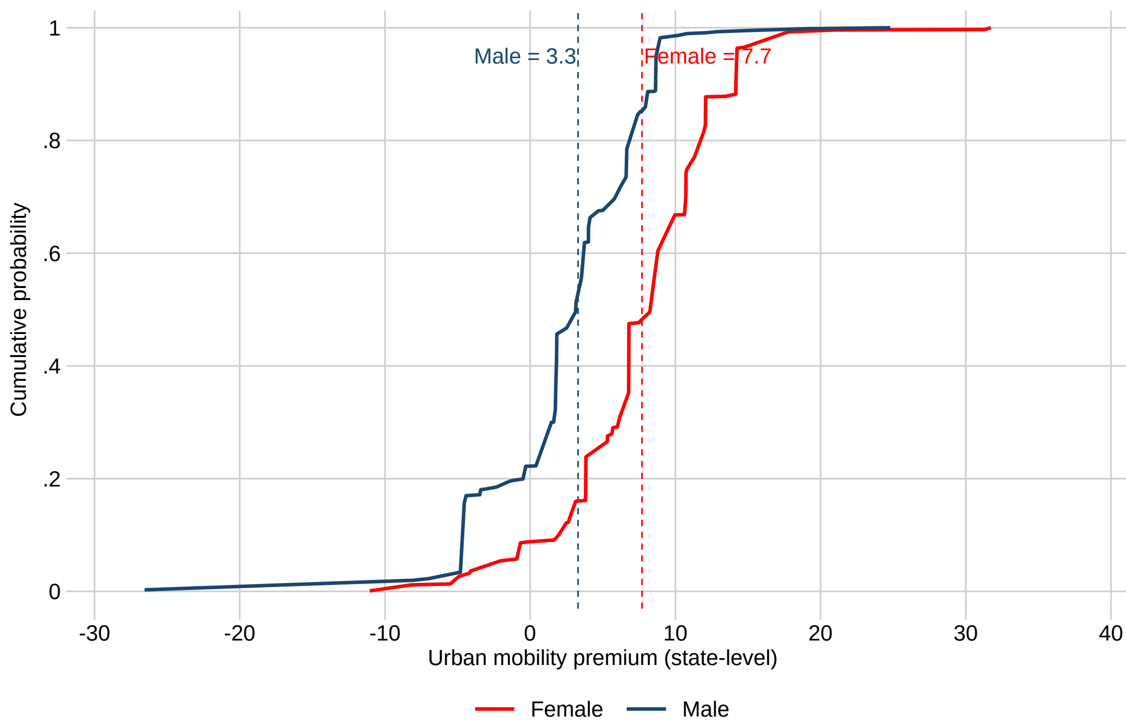
Figures

Figure 1: Urban Mobility Premia By Country



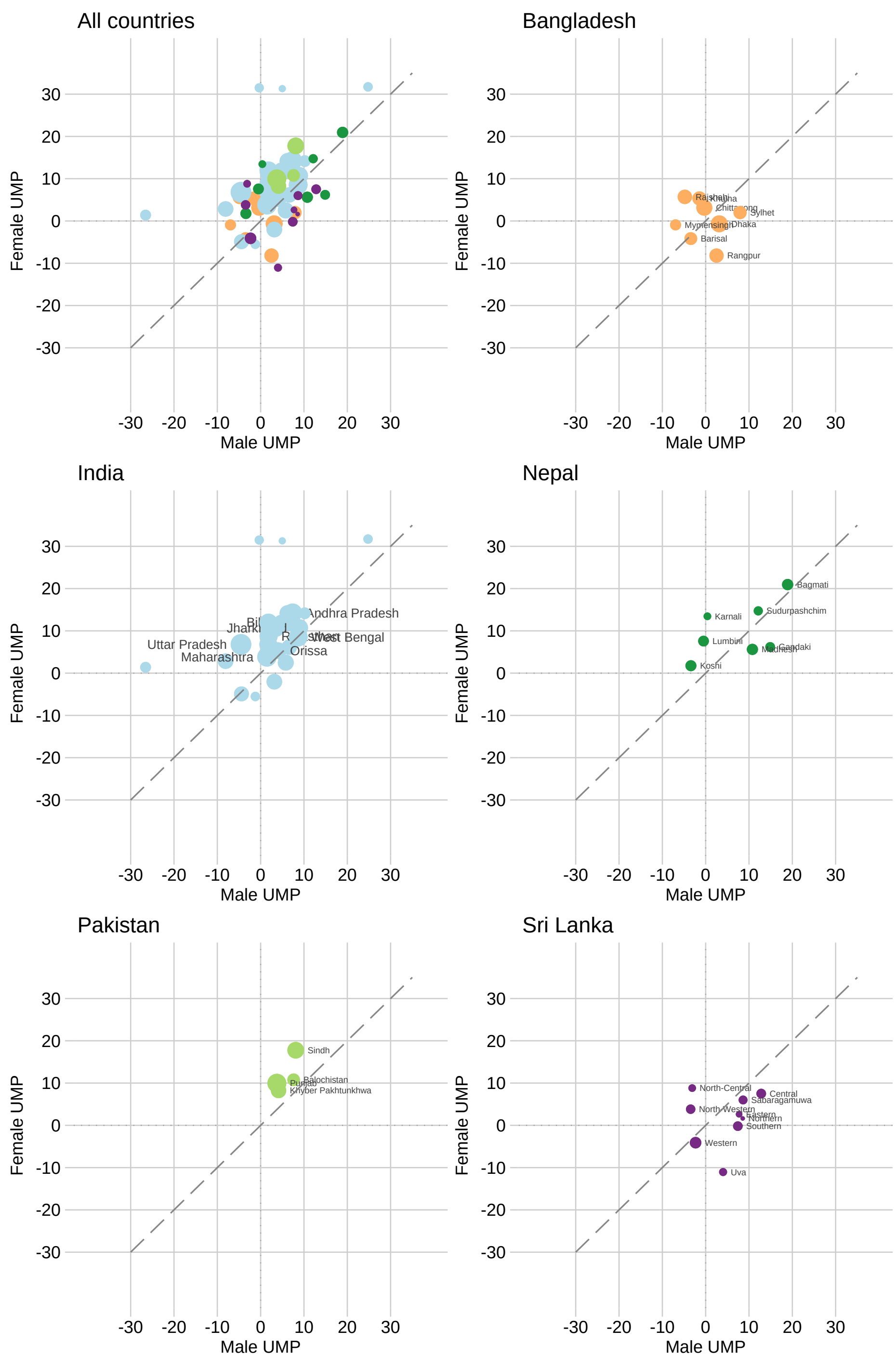
Note: The figure shows urban and rural bottom half mobility for girls (red) and boys (blue) for each sample country. Circles denote rural and triangles denote urban mobility. The connecting vertical lines show the urban mobility premium. Bottom half mobility estimates are bound midpoints.

Figure 2: CDFs of Male and Female Urban Mobility Premia



Note: The figure shows the cumulative distribution function of state-level urban bottom-half mobility premia for men and women. State-level premia compare urban and rural children within the same state, using education ranks calculated within country and gender groups. The distribution is weighted by state-level population, so that vertical line length reflects state population size. Mobility estimates are taken at midpoints of bounds. The vertical lines are the urban mobility premia means; the median values are where the CDF crosses probability 0.5.

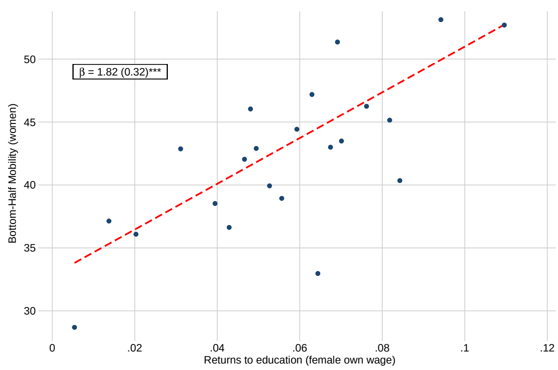
Figure 3: State-level Urban Mobility Premia for Women and Men



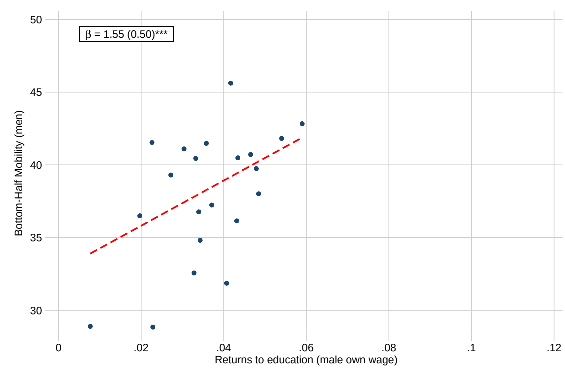
Note: The figure plots male and female urban mobility premia against each other, where each point is an estimate from a given subnational region. Regions above the 45 degree line have a female urban mobility advantage. Point size is proportional to log population. Regions with no rural component are excluded.

Figure 4: Bottom Half Mobility (BHM) and Returns to Education

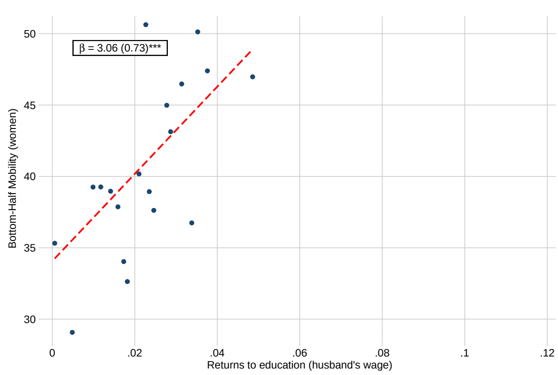
A. Women's BHM and returns to education



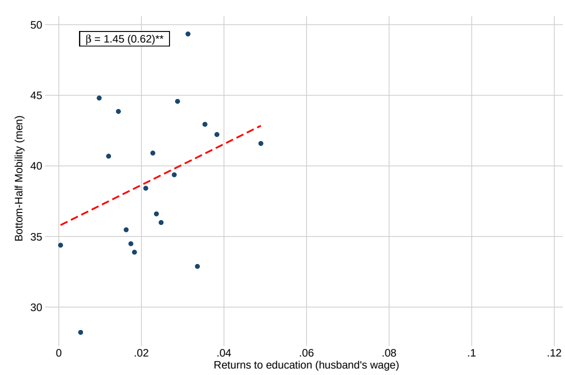
B. Men's BHM and returns to education



C. Women's BHM and marriage-market returns to education

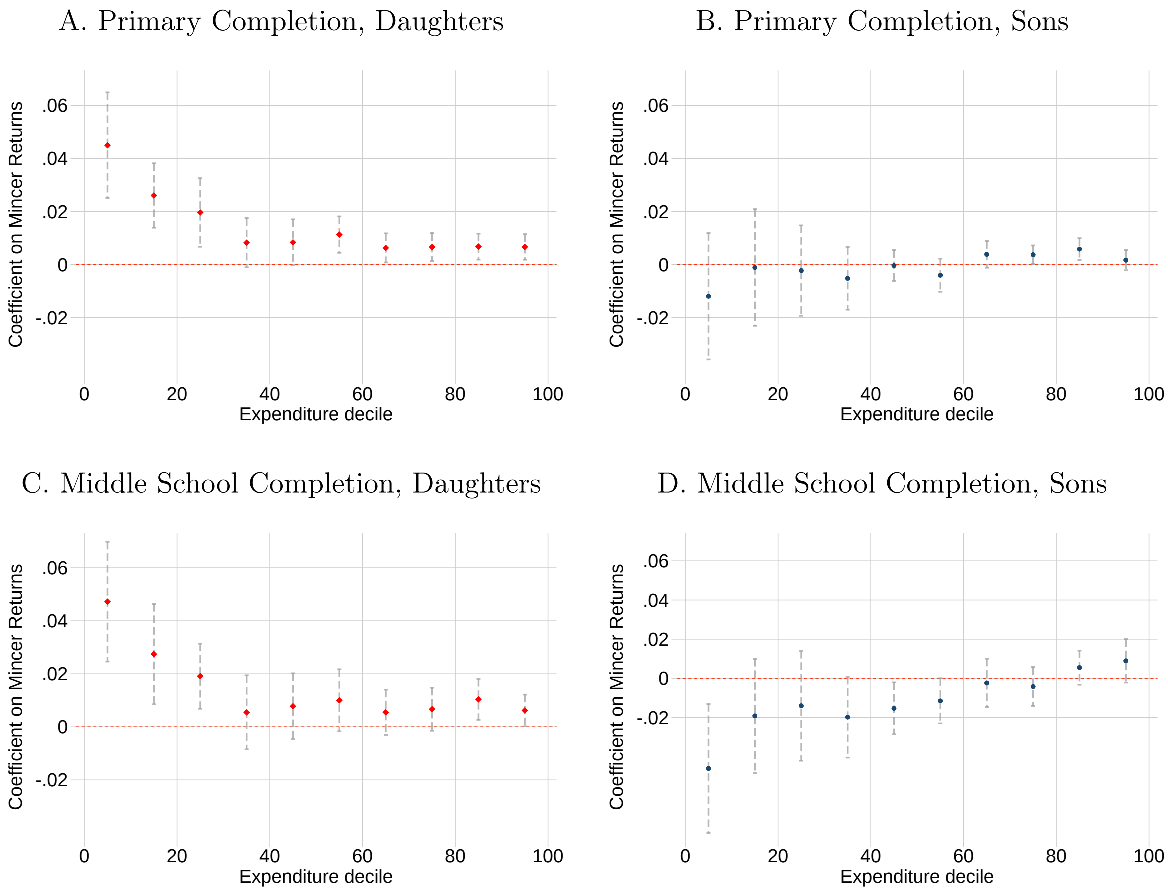


D. Men's BHM and women's marriage-market returns to education



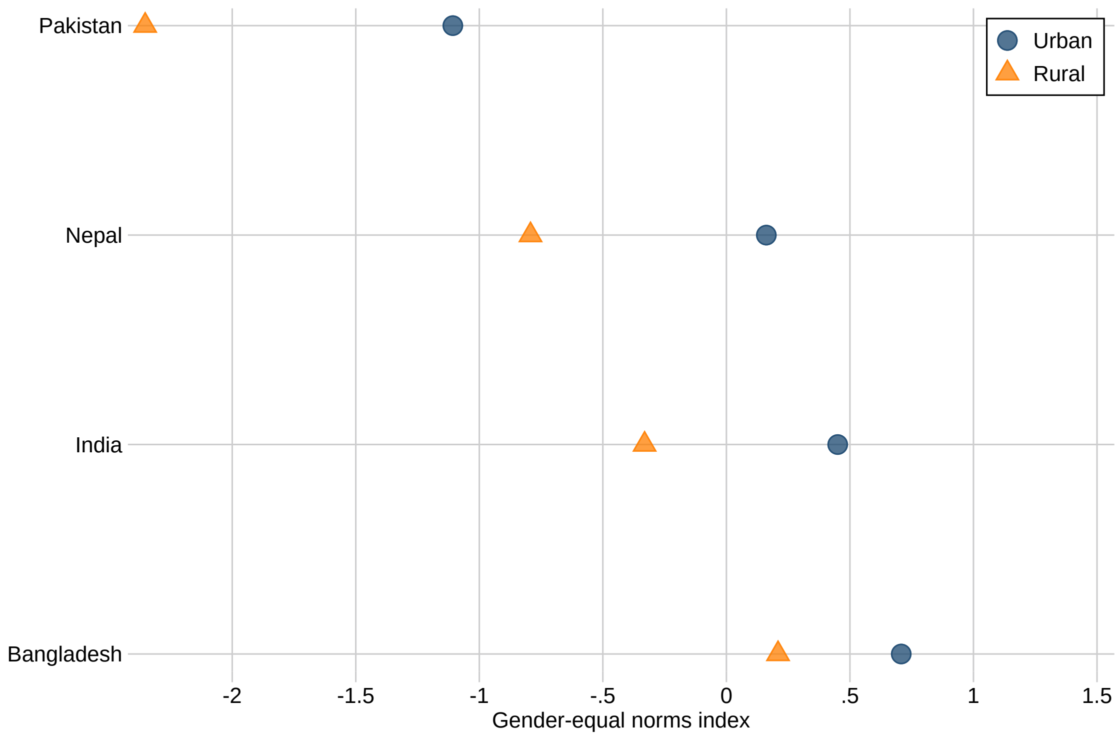
Note: The figures show binned scatterplots of state $\times$ urban/rural cell measures of bottom half mobility for sons and daughters against various measures of the returns to education. All estimates include country fixed effects. Mincerian returns to education use log wages as the dependent variable, and are calculated among individuals with non-missing wages. Marriage market returns to education are estimated from a regression of husband's log wages on wife's education. Both Mincerian regressions include controls for age and age-squared.

Figure 5: Subnational Relationship Between School Completion and Mincerian Returns, by Expenditure Decile



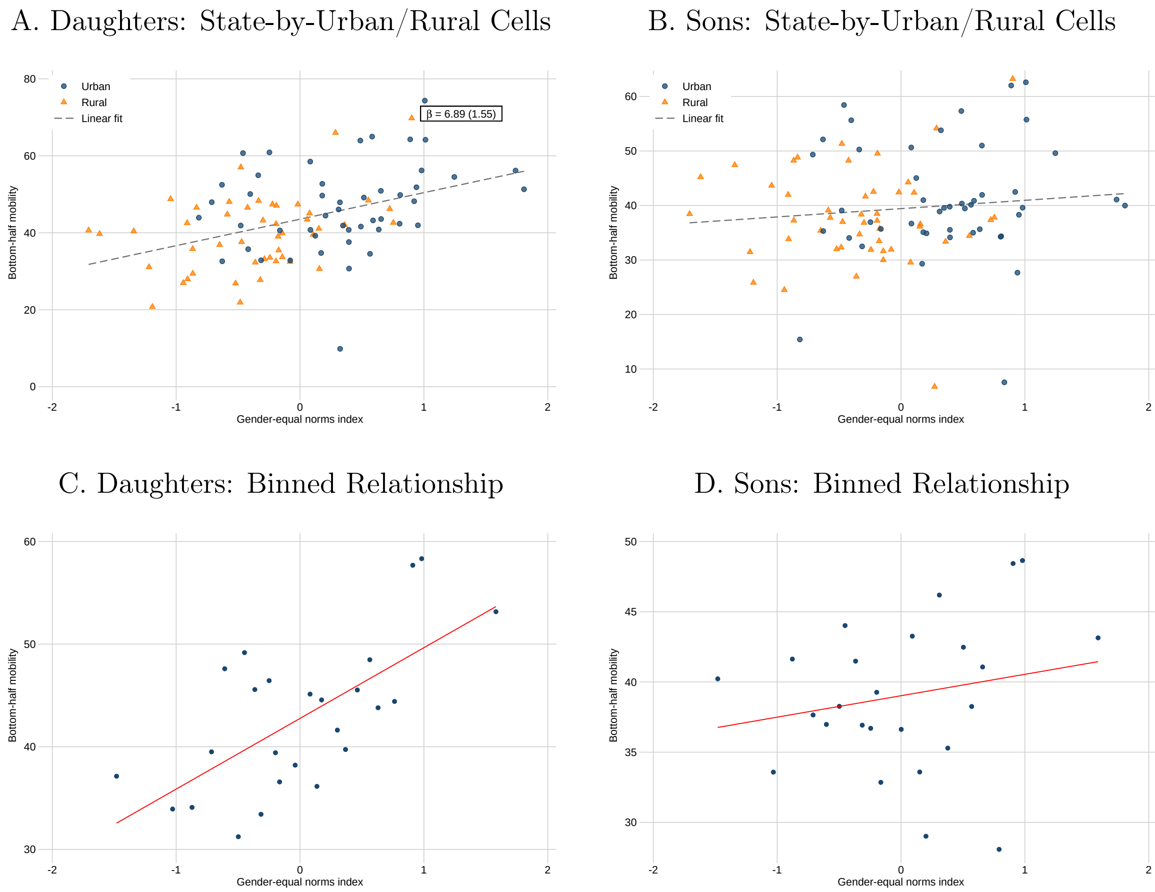
Note: Each point in the figure shows the coefficient from an individual-level regression of a school completion indicator on the subnational gender-specific Mincerian returns to education, with the sample restricted to one decile of the household per capita expenditure distribution. Thus, the leftmost point in Panel A tells us that, among bottom-decile families, daughters are 0.4 percentage points more likely to complete primary school in subnational regions with Mincerian returns to education that are 10 log points higher. The bars show 95% confidence intervals from standard errors clustered at the state level.

Figure 6: Urban and Rural Gender Norms by Country



Note: The figure shows average values of the standardized gender norms index in rural and urban areas of each country. The gender norms index is averaged across the following dimensions: son preference, reproductive choice, justification of domestic violence, and household decision making, and standardized. Each of these index components is measured as the share of female DHS respondents agreeing with a gender norm.

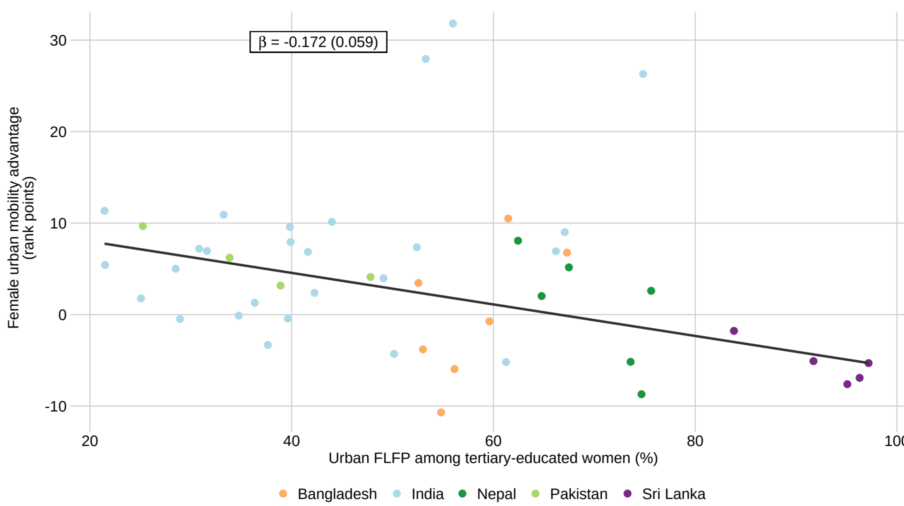
Figure 7: Bottom Half Mobility and Gender Norms



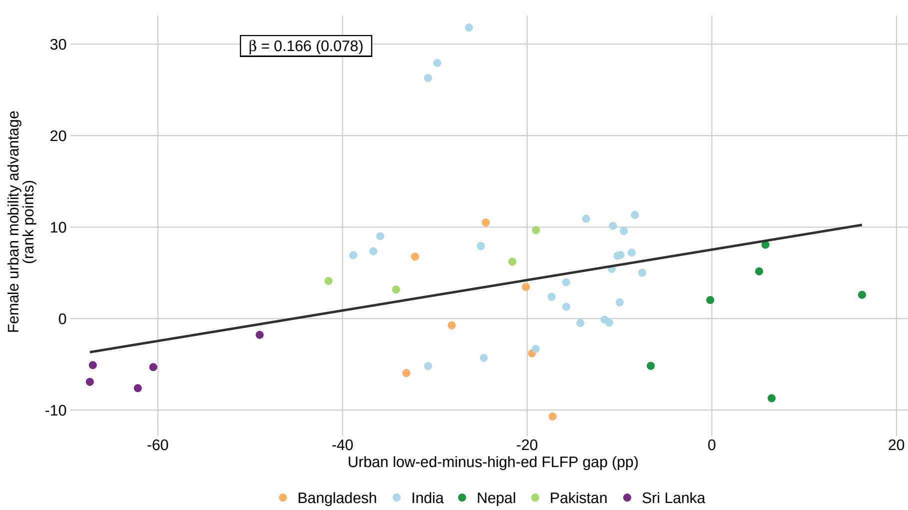
Note: The figure describes the subnational state × urban/rural cell relationship between bottom half mobility and the gender norms index. Panels A and B are scatter plots with one point per cell, while Panel C and D are binscatters. All panels absorb country fixed effects, with country means added back to both variables for display purposes. The gender norms index is averaged across the following dimensions: son preference, reproductive choice, justification of domestic violence, and household decision making, and standardized.

Figure 8: High-Status Female Labor Force Participation and the Female Urban Mobility Advantage

A. High-education FLFP



B. Status-selective FLFP gap



Note: The figure shows the urban subnational relationship between the female urban mobility advantage and two measures of female labor force participation among high-status women. In Panel A, the X axis shows the raw urban FLFP rate among women with tertiary education. In Panel B, it shows the FLFP gap between women with tertiary and those with less than high school education.

Tables

Table 1: Summary Statistics

Panel A: Summary Statistics

	Country					
	Bangladesh	India	Nepal	Pakistan	Sri Lanka	Overall
Mean years of education: children						
All	7.38	8.09	7.21	6.30	9.36	7.83
All genders (urban)	8.00	10.02	10.04	7.33	9.63	9.52
All genders (rural)	7.16	7.10	6.76	5.63	9.32	6.97
Daughters	6.78	7.27	6.36	4.81	8.73	6.96
Sons	7.81	8.91	8.41	7.40	9.94	8.64
Mean years of education: parents						
All	3.95	3.57	2.50	3.65	7.67	3.66
All genders (urban)	5.79	5.33	4.97	5.00	8.87	5.38
All genders (rural)	3.29	2.66	2.11	2.78	7.47	2.80
Fathers	4.46	4.82	3.53	5.02	7.60	4.82
Mothers	3.42	2.18	1.24	2.13	7.80	2.35
Gender norms index	0.84	0.82	0.79	0.70	–	0.81
Urbanization rate	26.1%	34.0%	13.7%	39.2%	14.4%	33.2%
Sample size	21853	32892	5448	287149	18190	365532

Panel B: Bottom Half Mobility

	Country					
	Bangladesh	India	Nepal	Pakistan	Sri Lanka	Overall
Country total	41.71	36.47	38.14	38.30	43.83	37.31
All sons	40.26	37.40	38.35	37.97	40.68	37.80
All daughters	43.72	35.53	37.99	38.74	47.25	36.89
Urban sons	40.29	41.68	49.65	40.97	44.98	41.65
Urban daughters	46.95	45.40	51.70	47.44	47.75	45.92
Rural sons	40.25	35.69	37.09	36.47	40.08	36.30
Rural daughters	43.75	32.52	37.93	34.70	47.44	34.15
Sons (urban minus rural)	0.04	5.99	12.56	4.51	4.90	5.35
Daughters (urban minus rural)	3.20	12.88	13.78	12.74	0.31	11.77
Female urban mobility advantage	3.16	6.89	1.22	8.24	-4.59	6.42
Sample size	21853	32892	5448	287149	18194	365536

Note: The table reports summary statistics for the primary sample. The sample size is the unweighted number of children with observed education. The overall estimate uses country and household weights to represent the combined population of all five countries. The gender norms index is unavailable for Sri Lanka. Bottom-half mobility (BHM) describes average child rank of children growing up with fathers in the bottom half of the education distribution. Ranks are calculated using national, within-gender education ranks. The son and daughter urban premia are urban BHM minus rural BHM; the female urban mobility advantage is the daughters urban premium minus the sons urban premium.

Table 2: Regression Estimates of Bottom Half Mobility

Gender	Pooled	Sons	Daughters	Pooled
	(1)	(2)	(3)	(4)
Urban	8.961***	5.318***	12.540***	5.318***
	(0.618)	(0.851)	(0.742)	(0.851)
Female				-2.639***
				(0.606)
Urban × Female				7.223***
				(1.011)
Constant	34.550***	35.891***	33.252***	35.891***
	(0.333)	(0.473)	(0.425)	(0.473)
Observations	184751	107027	77724	184751
R^2	0.022	0.007	0.046	0.026

Note: The table shows estimates from regressions of child education rank on indicator variables for urban residence and female gender. All regressions use household and country population weights. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Rank-Rank Regression Estimates of Intergenerational Mobility

Dependent variable	Child's education rank				
Sample	All	Sons	Daughters	All	
	(1)	(2)	(3)	(4)	(5)
Father's education rank	0.478***	0.478***	0.507***	0.454***	0.459***
	(0.013)	(0.013)	(0.012)	(0.013)	(0.013)
Urban	1.738	1.738	10.483***	-0.423	1.248
	(1.158)	(1.158)	(1.033)	(1.090)	(1.134)
Father's education rank × Urban	0.072***	0.072***	0.027*	0.078***	0.059***
	(0.018)	(0.018)	(0.017)	(0.018)	(0.018)
Father's education rank × Daughter	0.029*			0.041**	0.030*
	(0.017)			(0.016)	(0.017)
Father's education rank × Urban × Daughter	-0.045**			-0.044**	-0.042*
	(0.023)			(0.022)	(0.022)
Log per capita consumption					3.182***
					(0.138)
Log per capita consumption × Daughter					-0.074
					(0.185)
Daughters UMP	11.169			8.323	10.227
Sons UMP	3.539			1.536	2.729
Observations	365532	211753	153779	365531	363009
R^2	0.309	0.280	0.339	0.376	0.325
Cohort × State FE	No	No	No	Yes	No

Note: The table shows estimates from regressions of child education rank on father education rank. Each individual is assigned the rank at the midpoint of their rank bin. Ranks are calculated in the national, within-gender education distribution. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4: Mincer Regressions: Returns to Education

Dependent variable	Log own wage			Log husband's wage	
	(1)	(2)	(3)	(4)	(5)
Years of education	0.080***	0.069***	0.051***	0.037***	0.019***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Years of education × Female		0.015***	0.006***		
		(0.000)	(0.001)		
Years of education × Urban			0.023***		0.018***
			(0.000)		(0.001)
Years of education × Urban × Female			0.017***		
			(0.001)		
Age FE	Yes	Yes	Yes	Yes	Yes
Country × Year FE	Yes	Yes	Yes	Yes	Yes
Spouse age	No	No	No	Yes	Yes
Observations	2257964	2257964	2257964	1043797	1043797
R^2	0.676	0.705	0.722	0.678	0.697

Note: The sample in columns 1–3 is all working-age (16+) adults with non-missing wages in cohorts born since 1980 across the five country sample. The sample for columns 4–5 is only married women. All estimates use household and country population weights. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5: Gender Norms and Intergenerational Mobility

	Sons (1)	Daughters (2)	Sons (3)	Daughters (4)	Sons (5)	Daughters (6)
Gender-equal norms index	1.927	6.904***	2.627	8.756***	2.633	8.753***
	(1.718)	(2.030)	(2.161)	(2.023)	(1.633)	(1.158)
Country FE	No	No	Yes	Yes	No	No
State FE	No	No	No	No	Yes	Yes
Observations	95	95	95	95	92	92
R^2	0.026	0.202	0.039	0.276	0.920	0.945

Note: The table shows estimates from a state × urban/rural cell-level regression of bottom half mobility on the gender norms index. For bottom half mobility, we use the midpoint of the bounds for the given cell. All estimates use household and country population weights. The gender norms index averages female DHS responses on household decision-making agency, attitudes toward domestic violence, reproductive agency, and son preference, standardized to mean zero and unit standard deviation. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6: Female Urban Mobility Advantage from Household Consumption Differences Only

	Bangladesh	India	Nepal	Pakistan	Sri Lanka	All
Actual						
Sons (urban minus rural)	0.05	4.58	11.43	4.42	4.83	4.01
Daughters (urban minus rural)	0.20	13.28	15.19	12.72	-0.41	11.74
Female urban mobility advantage	0.14	8.70	3.75	8.30	-5.25	7.72
Predicted from consumption						
Sons (urban minus rural)	2.78	4.64	3.75	1.05	2.23	2.60
Daughters (urban minus rural)	3.37	4.94	2.21	1.87	0.24	3.40
Female urban mobility advantage	0.58	0.30	-1.54	0.82	-1.99	0.80
Sample size	11,048	12,295	3,123	146,923	7,539	180,928

Note: The table compares our main estimates of the female urban mobility advantage with estimates that are predicted entirely from urban-rural consumption differences. The Actual panel reports our main estimates. In the Predicted panel, we predict individual education using a polynomial in consumption, ignoring household rural-urban status. We then calculate bottom half mobility using those predicted measures.

Table 7: Mechanisms Behind the Female Urban Mobility Advantage

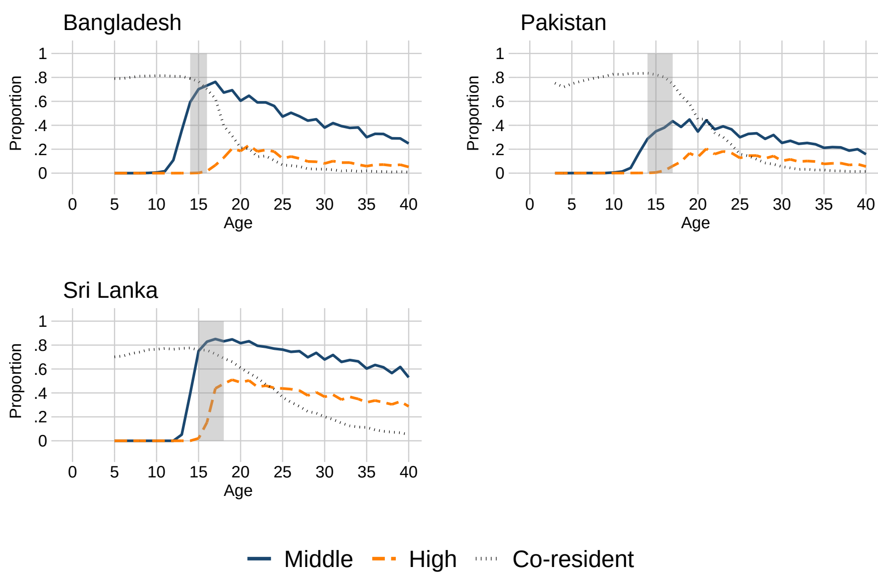
Dependent variable	Child's education rank				
	(1) Baseline	(2) + Expenditure	(3) + Returns	(4) + Norms	(5) + All three
Urban × Female	7.363***	7.612***	-0.892	4.527**	0.776
	(1.322)	(1.313)	(4.193)	(1.735)	(3.675)
Urban	5.238***	0.834	-2.164	5.665**	-5.606**
	(1.725)	(1.471)	(3.896)	(2.558)	(2.677)
Female	-2.668*	-0.201	-0.632	-1.475	8.284*
	(1.328)	(1.850)	(4.353)	(1.227)	(4.594)
Expenditure rank		0.298***			0.285***
		(0.033)			(0.034)
Expenditure rank × Female		-0.046			-0.047*
		(0.029)			(0.026)
Return to education			2.642**		3.265***
			(1.112)		(0.907)
Return to education × Female			-0.189		-1.560
			(1.051)		(1.047)
Gender-equal norms index				-0.550	-3.239**
				(2.152)	(1.340)
Gender-equal norms index × Female				3.614**	6.560***
				(1.434)	(2.200)
Share of FUMA explained (%)		-3.4	112.1	38.5	89.5
Observations	174837	174837	174837	174837	174837
R^2	0.026	0.107	0.045	0.029	0.123

Note: The table shows estimates of bottom half mobility, controlling for various candidate mechanisms for the female urban mobility advantage. In column 1, we regress the child education rank on urban and female indicators. We restrict the sample to bottom-half fathers so that the estimates can be interpreted as bottom half mobility. Subsequent regressions include the mechanism proxies: (2) household consumption rank; (3) state × urban/rural cell Mincer estimates; (4) the state × urban/rural cell gender norms index. The share explained is the percent change in the given column with respect to the column 1 Urban × Female coefficient. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

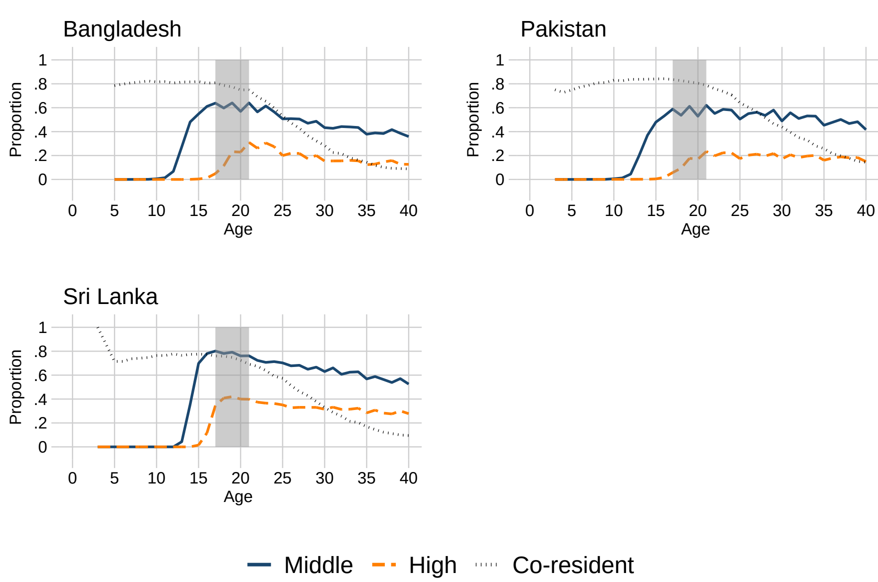
A Additional Figures and Tables

Figure A1: Coresidence and Educational Attainment

A. Women

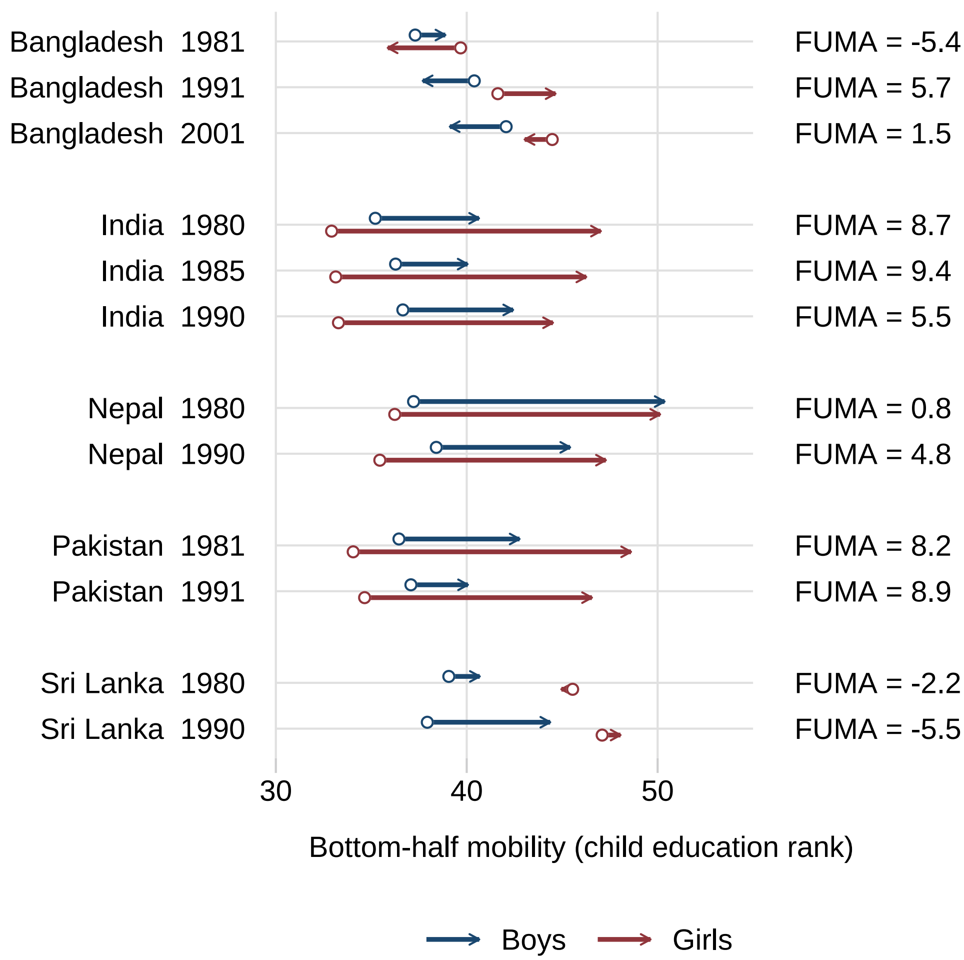


B. Men



Note: The figure shows how coresidence and school completion change across the life cycle in the countries where we use coresident parent-child data. The gray bars mark the primary sample used in the paper.

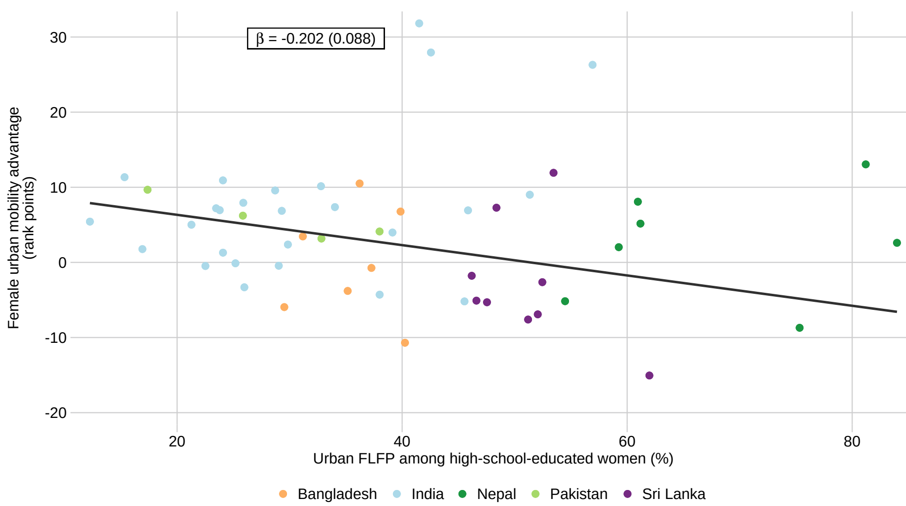
Figure A2: Female Urban Mobility Advantage by Country and Birth Cohort



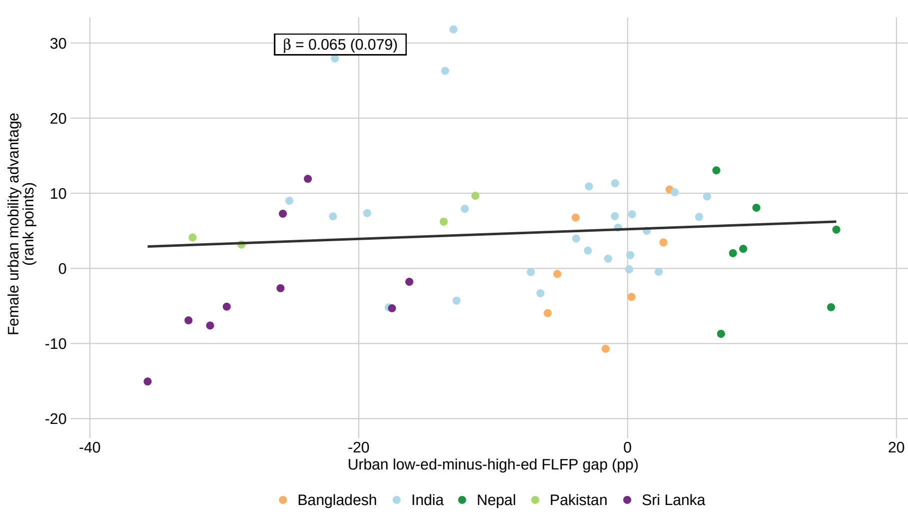
Note: The graph shows country-cohort estimates of the female urban mobility advantage, analogous to those in Figure 1. Each cohort is ten years in length, beginning with the year shown in the figure.

Figure A3: High-Status Female Labor Force Participation and the Female Urban Mobility Advantage: High School Threshold

A. High-education FLFP



B. Status-selective FLFP gap



Note: The figure reproduces Figure 8, defining high education as completed high school or more rather than tertiary education.

Table A1: Datasets Harmonized for Analysis

Country	Survey Name	Years of Data	N: HH	Co-resident
Bangladesh	Household Income & Expenditure Survey	2000, 05, 10, 16	75828	Yes
India	India Human Development Survey	2012	38387	No
Nepal	Nepal Living Standard Survey	1995, 2003, 11	7316	No
Pakistan	Pakistan Integrated Household Survey	1991	4791	No
Pakistan	Pakistan Social & Living Standards Measurement Survey	2006, 08, 10, 12, 14, 19	283426	Yes
Pakistan	Household Income & Expenditure Survey	2001, 04, 05, 07, 10, 11, 13, 15, 18	129906	Yes
Sri Lanka	Household Income & Expenditure Survey	1991, 95, 2002, 06, 09, 12	95719	Yes

Note: The table shows the datasets harmonized for the main analysis, and whether mobility estimates required limiting the sample to coresident parents and children.

Table A2: Age Ranges and Education Top-Codes in Main Analysis

Country	Age-range of Children (in years)		Top-coded Education Level for Children	
	Girls	Boys	Girls	Boys
Bangladesh	14–16	17–21	Middle school	High school
India	20–31	20–31	None	None
Nepal	20–31	20–31	None	None
Pakistan	14–17	17–21	Middle school	High school
Sri Lanka	15–18	17–21	Middle school	High school

Note: The table shows the age ranges of children used in the primary analysis, and the level at which education was top-coded. Appendix Tables A4 and A7 show robustness of the female urban mobility advantage to other age and top-coding choices.

Table A3: Sample by Country

Country	Father-Daughter Pairs	Father-Son Pairs
Bangladesh	8,916	12,937
India	16,391	16,501
Nepal	3,155	2,293
Pakistan	116,536	170,613
Sri Lanka	8,785	9,409
Total	153,783	211,753

Note: The table shows the sample size in each country in the main analysis.

Table A4: Coresidence Mobility Comparisons

Country	Sample	Urban boys	Rural boys	Urban girls	Rural girls	FUMA	N
Panel A: Restricting Nepal and India to coresident children							
India	Analysis sample	41.6	35.6	45.9	33.0	6.9	32,892
India	Coresident pairs only	41.2	36.0	45.0	31.9	7.9	17,139
Nepal	Analysis sample	49.5	36.9	49.6	35.9	1.1	5,448
Nepal	Coresident pairs only	46.7	35.1	51.4	33.0	6.9	1,893
Panel B: Child generation from age 20–31 in Pakistan, Bangladesh, and Sri Lanka							
Pakistan	Analysis sample	41.1	36.6	47.2	34.4	8.3	287,149
Pakistan	Ages 20–31, coresident pairs	40.7	35.7	44.4	31.7	7.7	299,126
Bangladesh	Analysis sample	38.8	38.8	44.9	41.7	3.2	21,853
Bangladesh	Ages 20–31, coresident pairs	38.7	38.0	36.6	36.9	-1.1	18,328
Sri Lanka	Analysis sample	43.6	38.2	47.1	46.8	-5.0	18,194
Sri Lanka	Ages 20–31, coresident pairs	42.3	37.0	37.9	38.5	-5.8	18,840

Note: The table shows robustness of the female urban mobility advantage to different sample choices. For Nepal and India, where we have data on parent-child links for non-coresident children, we show how the estimates change if we restrict the sample to only coresident children. For Pakistan, Bangladesh, and Sri Lanka, where the main sample is limited to coresident children at young ages, we show how estimates change if we use the age 20–31 range that was used in Nepal and India.

Table A5: Bottom Half Mobility Regression Estimates by Country

Dependent variable	Child's education rank				
Country	BGD	IND	NPL	PAK	LKA
	(1)	(2)	(3)	(4)	(5)
Urban	-0.672	4.827***	9.466***	3.984***	3.472***
	(1.084)	(0.945)	(2.205)	(0.319)	(1.302)
Female	3.825***	-1.983**	2.517***	-2.019***	3.044***
	(0.728)	(0.775)	(0.908)	(0.271)	(0.597)
Urban × female	-1.747	8.312***	2.226	8.621***	-4.188**
	(1.620)	(1.233)	(2.660)	(0.471)	(1.805)
Constant	41.697***	36.620***	38.779***	36.855***	42.629***
	(0.501)	(0.548)	(0.819)	(0.184)	(0.399)
Observations	11068	12525	5085	145140	10845
R^2	0.005	0.026	0.014	0.023	0.004

Note: The table shows bottom half mobility estimates analogous to those in Table 2, but by country. Each column is a country-specific estimate of child education rank on the indicator variables shown, with the sample limited to children with bottom-half fathers. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A6: Rank-rank regression estimates of intergenerational mobility, by country

Dependent variable	Child's education rank				
Country	BGD	IND	NPL	PAK	LKA
	(1)	(2)	(3)	(4)	(5)
Father rank	0.408***	0.454***	0.439***	0.464***	0.300***
	(0.014)	(0.015)	(0.020)	(0.005)	(0.010)
Urban	-4.168***	1.560	8.174***	2.793***	2.986*
	(1.542)	(1.307)	(2.960)	(0.449)	(1.635)
Father rank × Urban	0.096***	0.061***	-0.008	0.023***	-0.007
	(0.022)	(0.020)	(0.039)	(0.007)	(0.024)
Father rank × female	-0.120***	0.003	-0.018	-0.022***	-0.088***
	(0.018)	(0.020)	(0.023)	(0.008)	(0.014)
Father rank × Urban × female	-0.056*	-0.161***	-0.074	-0.086***	0.051
	(0.031)	(0.027)	(0.047)	(0.011)	(0.037)
Female UMP	-2.163	13.071	11.768	12.585	-0.637
Male UMP	-1.760	3.075	7.979	3.357	2.799
Observations	21852	26615	10018	287149	23203
R^2	0.170	0.263	0.203	0.240	0.104

Note: The table shows intergenerational mobility estimates using rank-rank regressions, analogous to those in Table 3. Each regression is a regression of child education rank on parent education rank. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A7: Robustness of the Female Urban Mobility Advantage to Alternate Education Top-Coding

Panel A: Female Urban Mobility Advantage

	Bangladesh	India	Nepal	Pakistan	Sri Lanka	Overall
Baseline estimates	3.16	6.89	1.22	8.24	-4.59	6.42
Middle school, all countries	1.87	7.83	3.19	9.05	-1.96	7.17
No education top-coding	3.63	6.89	1.22	8.08	-2.36	6.48
Observations	21,853	32,892	5,448	287,149	18,194	365,536

Panel B: Intergenerational Mobility Regression Estimates

	Urban × Female (1)	Father's rank × Urban × Female (2)
Baseline estimates	7.222***	-0.045**
	(1.011)	(0.023)
	184,845	365,532
Middle school, all countries	7.593***	-0.057***
	(1.049)	(0.021)
	168,873	329,568
No education top-coding	7.211***	-0.043*
	(1.012)	(0.023)
	184,845	365,532

Note: The table shows robustness of the main estimates to different child-education top-coding choices. Each panel shows (i) our baseline estimates; (ii) estimates from top-coding all children at middle school; (iii) estimates with no education top-coding. Panel A reports the female urban mobility advantages analogous to Table 1. In Panel B, column 1 shows the Urban × Female interaction from a regression equivalent to the bottom half mobility regression in Table 2. Column 2 shows the relevant interaction coefficient from the parent-child rank-rank regressions in Table 3. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A8: Mechanisms for the Urban Mobility Premium, by Gender

Dependent variable	Child's education rank									
Sample	Sons					Daughters				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Urban	5.238***	0.834	-2.164	5.665**	-5.606**	12.600***	8.446***	-3.056	10.192***	-4.830
	(1.725)	(1.471)	(3.896)	(2.558)	(2.677)	(1.530)	(1.603)	(4.361)	(2.693)	(4.219)
Expenditure rank		0.298***			0.285***		0.251***			0.238***
		(0.033)			(0.034)		(0.022)			(0.025)
Return to education			2.642**		3.265***			2.453***		1.705**
			(1.112)		(0.907)			(0.758)		(0.756)
Gender-equal norms index				-0.550	-3.239**				3.064	3.321
				(2.152)	(1.340)				(2.630)	(2.060)
Share of UMP explained (%)		84.1	141.3	-8.2	207.0		33.0	124.2	19.1	138.3
Observations	102287	102287	102287	102287	102287	72550	72550	72550	72550	72550
R^2	0.007	0.097	0.019	0.007	0.109	0.047	0.117	0.073	0.052	0.137

Note: This table is analogous to Table 7, and shows how our regression estimates of the female urban mobility advantage change when controlling for proxies for the candidate mechanisms. While the prior table shows the effect on the FUMA directly, this table separately shows the relationship for the sons' and daughters' urban mobility premia; the FUMA is the difference between these two premia. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

B Construction of Bottom Half Mobility measures

Table B1 shows transition matrices for three decadal birth cohorts for matched father and son pairs in Pakistan. Let r_c be the child rank and r_p be the parent rank. We are interested in using these tables to construct measures of upward mobility like:

1. The probability of exiting the bottom quintile, $E(1(r_c > 20)|r_p < 20)$;
2. Absolute upward mobility, or the expected child rank given a father at the 25th percentile, $E(r_c)|r_p = 25)$; or
3. Bottom half mobility, or the expected child rank given a father in the bottom half, $E(r_c)|r_p \in [0, 50])$

This is challenging primarily because the father bin sizes (which are used as conditioning variables) change across cohorts. In the 1971–80 birth cohort, 56% of fathers are in the bottom–coded education category, a share which falls to 45% by 1991–2000. We cannot directly compare outcomes for children in the bottom bin, because the bottom bin has a different meaning in different cohorts and countries.

Table B1: Transition Matrices for Father and Son Education in Pakistan

Panel A: Sons Born 1971–80

Father ed attained	Son highest education attained < 2 yrs. (36%)	Some primary (9%)	Completed primary (17%)	Completed middle (20%)	Completed HS (17%)	N
<2 yrs. (56%)	0.45	0.12	0.16	0.17	0.10	715.00
Some primary (10%)	0.39	0.09	0.24	0.18	0.10	100.00
Completed primary (13%)	0.23	0.09	0.27	0.23	0.19	161.00
Some middle (17%)	0.21	0.03	0.16	0.25	0.35	226.00
Some secondary (3%)	0.11	0.00	0.10	0.36	0.43	56.00
Some Sec+ (2%)	0.11	0.01	0.02	0.25	0.60	52.00

Panel B: Sons Born 1981–90

Father ed attained	Son highest education attained < 2 yrs. (23%)	Some primary (6%)	Completed primary (18%)	Completed middle (26%)	Completed HS (28%)	N
<2 yrs. (47%)	0.38	0.08	0.21	0.21	0.13	31425.00
Some primary (5%)	0.22	0.10	0.24	0.28	0.17	3226.00
Completed primary (16%)	0.14	0.06	0.25	0.31	0.24	9887.00
Some middle (22%)	0.06	0.03	0.13	0.35	0.43	13269.00
Some secondary (4%)	0.03	0.01	0.05	0.22	0.69	2395.00
Some Sec+ (7%)	0.02	0.00	0.03	0.14	0.81	4353.00

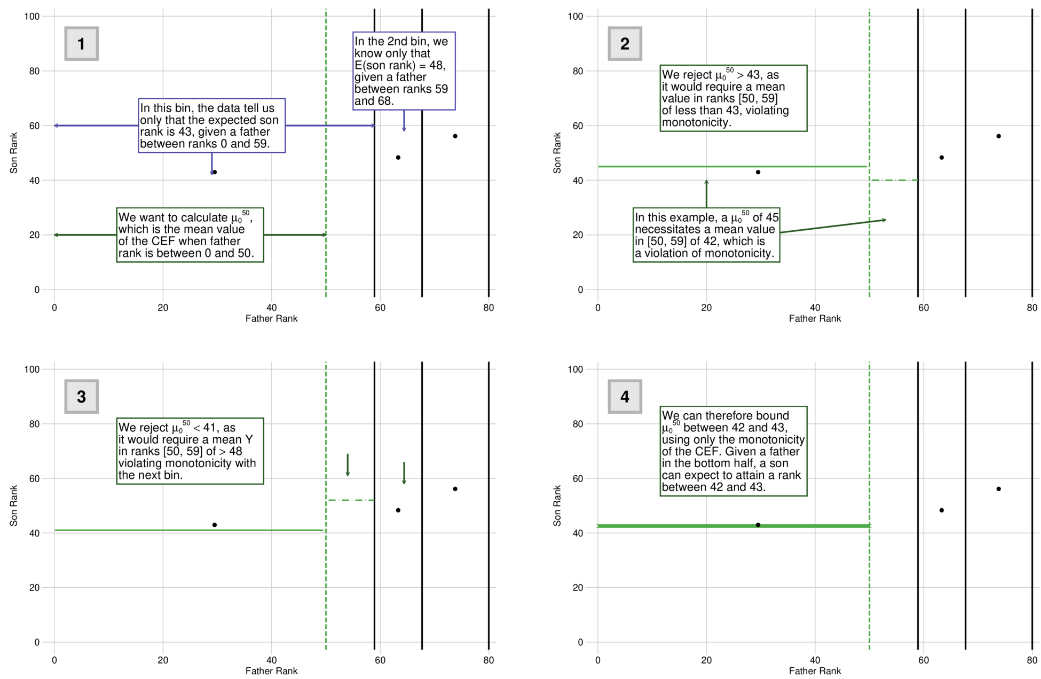
Panel C: Sons Born 1991–2000

Father ed attained	Son highest education attained < 2 yrs. (19%)	Some primary (5%)	Completed primary (15%)	Completed middle (25%)	Completed HS (36%)	N
<2 yrs. (45%)	0.33	0.07	0.19	0.22	0.19	51594.00
Some primary (4%)	0.17	0.11	0.19	0.28	0.25	4221.00
Completed primary (16%)	0.12	0.05	0.20	0.29	0.33	15612.00
Some middle (25%)	0.05	0.02	0.10	0.31	0.51	22780.00
Some secondary (3%)	0.02	0.01	0.04	0.17	0.76	2619.00
Some Sec+ (7%)	0.02	0.01	0.03	0.11	0.83	9186.00

We show in Asher et al. (2024) that mobility measures like absolute upward mobility and bottom half mobility can at best be bounded given education transition matrices. The intuition is that the parent rank is interval-censored, so we cannot directly observe outcomes of children at a given parent percentile. We can bound them based on the mean of the parent bin, and an assumption that children with more educated parents will on average receive more education than those with less.

Figure B1 illustrates the calculation of bounds on bottom half mobility (labeled $\mu_0^{50} = E(r_c)|r_p \in [0, 50]))$ for the 1971–80 birth cohort in Pakistan.

Figure B1: Sample Calculation of μ_0^{50} for 1971–80 Birth Cohort, in Pakistan



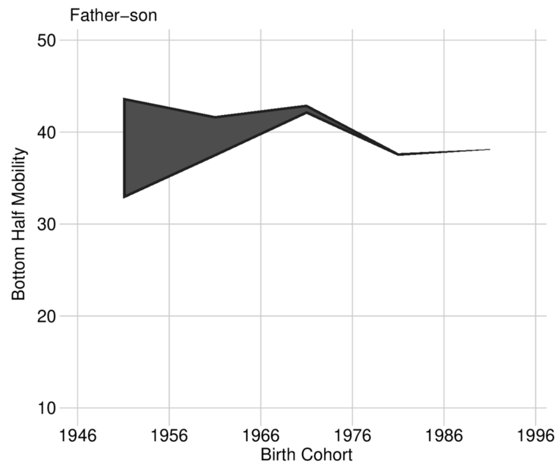
Note: Figure B1 illustrates the process of calculating bounds on $\mu_0^{50} = E(y|x \in [0, 50])$ using data from the 1971–80 birth cohort in Pakistan.

Panels A and B of Figure B2 show upper and lower bounds on μ_0^{50} for father-son and father-daughter pairs across many birth cohorts in Pakistan. The bounds are smallest when a parent education bin boundary coincides closely with rank 50. In the limit case, where a parent bin boundary coincides exactly with rank 50, μ_0^{50} is point-identified as the average child outcome for all children given parents in the bottom 50%.

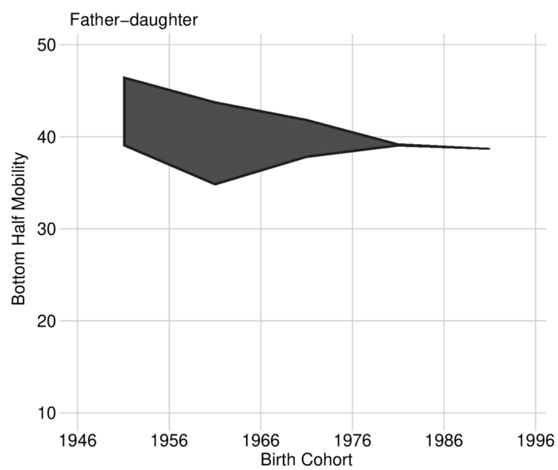
We show in Asher et al. (2024) that when the bottom-coded education bin has much more than 25% of parents (as is the case for most South Asian birth cohorts), bottom half mobility tends to be tightly bounded, while other measures like absolute upward mobility have bounds that are too wide to be useful. For this reason, this paper focused on bottom half mobility as a measure of upward mobility.

Figure B2: Bottom Half Mobility, Fathers to Sons and Daughters in Pakistan

A. Father–Son Upward Mobility (Rank)



B. Father–Daughter Upward Mobility (Rank)



Note: Bounds on bottom half mobility ($\mu_0^{50} = E(y|x \in [0, 50])$) for multiple birth cohorts in Pakistan, where x is parent education rank and y is child education rank.