# Reforms, Development and Persistence of Gender Gap: Recent Evidence from Private School Choice in India

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# Background

- Since the early 1990s there has been a rapid growth of private unaided schools around the world, including many emerging and developing countries
- This research is part of a bigger project 'public and private schools in developing countries' that I initiated in 2008.
- I have been working on a number of specific issues within this broader topic:
  - Public infrastructure and location of private schools
  - Effect of private school growth on universal literacy (with Geeta Kingdon)
  - Gender gap in private school enrolment (with Maitra & Sharma)
  - What explains private school premium? (with Paul Glewwe)
  - Heterogeneity of private schools, home tutoring and school choice (with Wiji Arulampalam and Bibhas Saha)

# Reforms & gender gap: Introduction

- Women in developing countries lag behind men in many respects, including access to education, health, job opportunities.
- While some of this gender gap can be explained by old age security, property inheritance, dowry, sons may be preferred over daughters for other socio-religious reasons like family lineage, prestige and power, birth and death rituals and beliefs about religious duties and salvation
- It is however increasingly been recognised that gender discrimination hinders growth and development
- Despite the dominance of the state sector, a significant growth of private schools around the world cannot be ignored
- In this context, we examine the nature of gender gap in private school enrolment and also its persistence over time.

# Case of India

- India is an important case in point
  - Gender discrimination in different walks of life is rife in India
  - India has launched the pro-market reforms back in 1991 and has experienced significant economic growth from around mid-1990s onwards.
  - This has been accompanied by a rapid growth of private schools which are argued to be more efficient in imparting learning.
  - The 1990s has also witnessed a number of other constitutional/policy reforms (73$^{rd}$constitutional amendment to reserve seats for women at the village council, modification of Hindu Succession Act of 1956 to ensure women's inheritance rights).
  - It is thus interesting to explore the extend and evolution of gender gap, if any, in private school enrolment over a decade of rapid reforms and growth.

# Typology of schools in India

- There are three broad types of recognized schools in India, namely government schools, private aided schools and private unaided schools.
  - Government and private aided schools are typically government recognized, i.e., they have the government stamp of approval. They are similar in many respects since private aided schools are almost entirely financed by the government and have little control over staffing (hiring/firing decisions) and fee levels, despite being nominally private managed.
  - Private unaided schools (whether recognized or not) enjoy more autonomy compared to private aided schools and are typically self-funded out of fee income. Thus the private unaided schools are the truly private schools in India.
  - Private unaided schools can be further categorized into religious and non-religious schools, though for the purposes of this paper we do not make this distinction as few children in our sample attend religion schools.
  - Most often private unaided schools offer instructions in English
- Thus for our empirical analysis, we label the private unaided schools as private schools so that the reference category pertains to the government and private aided schools pooled together.

# Growing popularity of private schools

- Despite the absence of school fees, the dismal state of the state schools in India have induced many households including some poor to take advantage of the newly emerging private unaided schools in India in order to meet their educational needs (Dreze and Kingdon, 2001).
- While there is no systematic data available for private school fees across India, Tooley and Dixon (2003) found that the average private school fee was only about £2 (= Rs. 153) a month in Hyderabad while the median private school fee across rural India was estimated to be Rs. 63 per month in 2003 (see Muralidharan and Kremer, 2008).
- It is not the case that government schools are free. Parents incur substantial costs (such as expenditure on books, stationery, travel, and school uniforms) even when they send their children to government schools (see Kingdon (2005)).
- It is therefore not surprising that many poorer households too are increasingly choosing private schools in India (Tooley and Dixon, 2003).
- The latter has further been facilitated by the use of English as the medium of instruction in many private fee-paying schools especially in urban areas as the returns to English based education increase rapidly in India's new economy (Munshi and Rosenzweig (2006) for certain lower caste community in Mumbai).

# Growth of private schools: 1993/94- 2004/05

| | IHDS2 (all) 2004-05 | IHDS1 (rural) 1993-94 | IHDS2 (rural) 2004-05 |
|---|---|---|---|
| School enrolment rate | 0.73 (0.45) | 0.53 (0.49) | 0.71 (0.45) |
| Private school enrolment rate | 0.28 (0.45) | 0.08 (0.28) | 0.19 (0.39) |

- Source: IHDS data 1993-94 and 2004-05

# School Privatisation & literacy 1992-2002

| | Average share of recognised PUA schools Mean (sd) | | 10-19 literacy rates | | | |
|---|---|---|---|---|---|---|
| | 1992-93 | 2002-03 | 1992-93 | | 2002-03 | |
| | | | Male | Female | Male | Female |
| Primary | 0.044 | 0.08 | --- | --- | --- | --- |
| | (0.07) | (0.10) | | | | |
| Upper primary | 0.11 | 0.17 | 0.77 | 0.58 | 0.87 | 0.77 |
| | (0.14) | (0.18) | (0.13) | (0.21) | (0.11) | (0.17) |
| Secondary | 0.15 | 0.28 | 0.74 | 0.51 | 0.84 | 0.69 |
| | (0.15) | (0.22) | (0.12) | (0.21) | (0.11) | (0.18) |

- Source: Pal and Kingdon 2011

# Existing literature

- The issue of gender gap in school education/attainment in India has been well researched ; see for example Pal (2004), Kingdon (2005), Bhaskar and Gupta (2007) among others.
- However the issue of *gender gap* in *private school choice* has not been analysed for all India (with the exception of Munshi and Rosenzweig, 2006, for a small community in Mumbai).
  - M&R (2006) argued that boys are sent to local language state schools to yield network advantage despite significant increase in returns to English-medium education in the post reform period.
- There is however some literature pertaining to different aspects of private schools in India :
  - Relative efficiency of public and private school (Bashir 1994, Kingdon 1996, Muralidharan and Kremer 2006)
  - Location choice of private schools (Pal 2010)
  - Effect of growth of private schools on universal literacy (Pal and Kingdon, 2011)

# Aims and objectives

- We raise two questions in this paper:
  - First, for a given year, what is the extent, if any, of gender bias in private school choice?
  - Second, whether the gender bias in private school choice is declining over a decade (1993-94 and 2004/05) of rapid economic growth induced by various reforms.

# Hypothesis 1: Gender gap at a point in time

- Growth of private schools offers parents a choice between private and public schools. Private schools are argued to be more efficient than state schools in imparting learning.
- One can envisage two opposing effects of private school growth on gender gap in private school enrolment:
  - Private schools are fee-paying schools and parents may choose to send only boys to private schools: (i) if returns to boys' private schooling are higher and/or (ii) parents have son preference for some other reasons.
  - Rise of private schools may however mitigate gender differences in school choice in a number of ways:
    - Satisfying differentiated demand for girls' schooling (especially for adolescent girls):
      - Access to local schools
      - Schools with access to girls' toilet and other infrastructural facilities
    - School choice may also induce more enlightened parents (who can afford paying fees) to send both boys and girls .
- As such, the net effect of private school growth on gender gap is likely to be ambiguous and we explore it empirically in this paper.

# Hypo 1a: Significance of family composition

- Family composition may also be important. We argue that whether a child belongs to a mixed (with both boys and girls) or a single (only girls) gender household can have important implications for parental investment in private schools.
  - First in an environment where there are both boys and girls, altruistic parents might not be willing to exhibit open discrimination and this is likely to benefit girls in mixed gender households.
  - A second possibility pertains to an income effect. The potential lifetime income of households is higher in the presence of a boy (they are likely to co-reside when adults, provide old age security to parents and so on) and this makes households think that they are richer. To the extent that investing in girls' schooling is a normal good, parents with boys are more likely to invest in girls' schooling by sending them to private school.
  - In other words, girls from single gender (girl only) households may suffer from lower human capital investment (saving for dowry?)

# Hypothesis 2: Gender gap over time

- Our second hypothesis pertains to whether gender gap in private school enrolment has changed over a decade of rapid economic growth and policy reforms during the 1990s.
- This is an eventful decade and the gender gap in private school choice may increase/decrease/remain unchanged over the decade:
  - Economic growth since the mid-1990s may improve the well-being of everyone, but disproportionately more for women who lag behind men in many respects.
  - Policy reforms directly targeted at women would empower women by ensuring their rights, resources and voice - the result could be a decline in gender gap.
  - Positive effects of growth/policy reforms could however be negated somewhat if counter forces may set in as a result of reforms and growth:
    - Chamarbagwalla (2006) argued that trade liberalisation has lowered the skilled wages for women in India during the post reform period.
    - Bardhan (2005) had further argued that India's economic liberalisation has been driven by growth in the service sector at the cost of the rural sector. The result has been lower wage growth and higher poverty of the rural sector

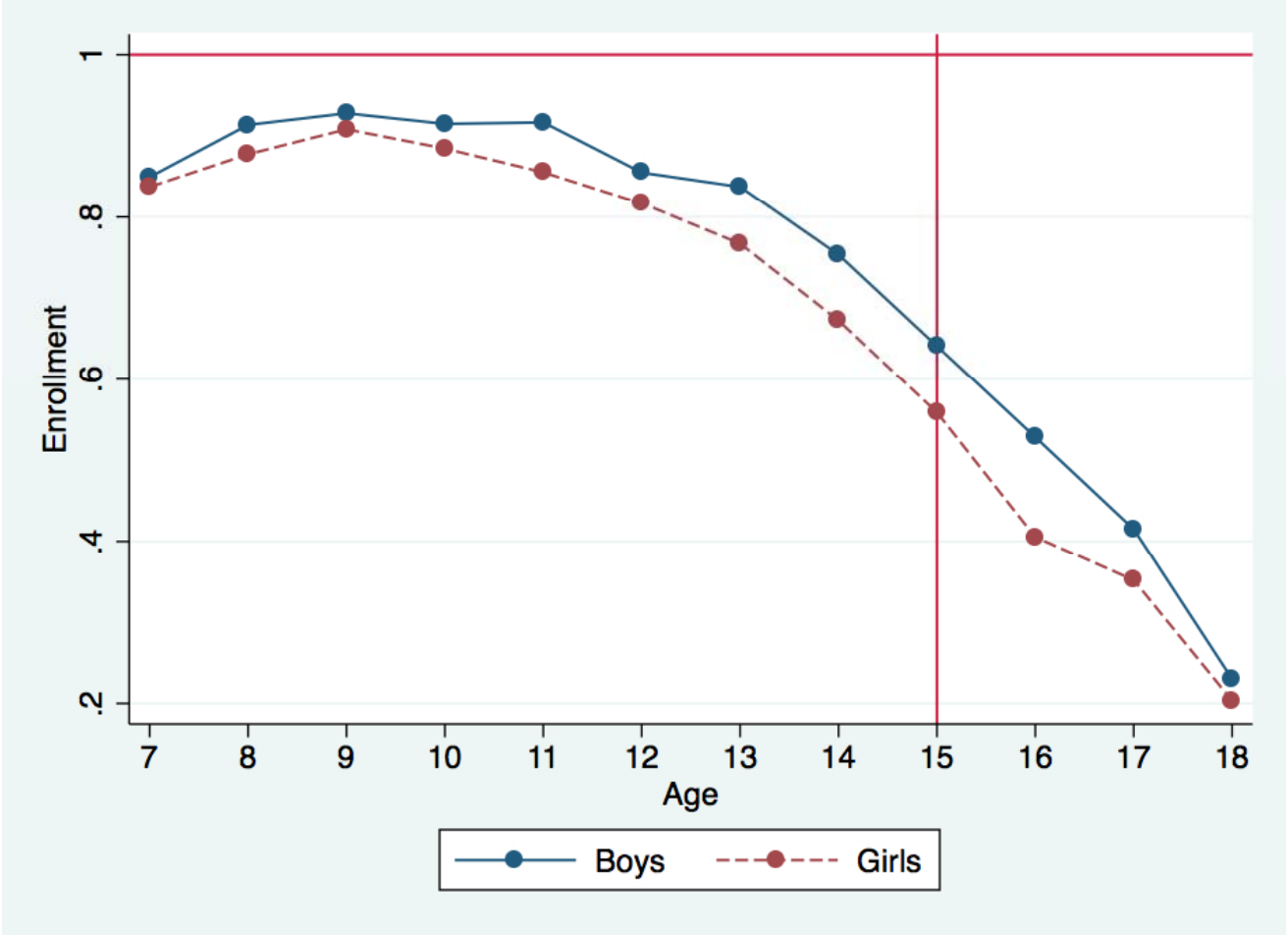
# Significance of the study

- This is an important exercise because:
  - Education is a primary instrument for women's empowerment, especially because it generates important positive externalities for fertility, child and reproductive health and also child schooling
  - Private school enrolment is an obvious outcome that highlights the parental incentives for human capital investment for their children in India's new economy: clearly, parents would invest in private schools for boys (girls) if returns to boys' (girls') private schooling are higher.
  - Growth can play a major role in reducing gender gap just as women's empowerment (through targeted policy reforms) can accelerate growth and development, thus justifying our focus on the evolution of gender gap over time.
  - A focus on gender gap in private school choice would also enable us to account for the potential effects of private school growth on gender inequality and its persistence, if any.

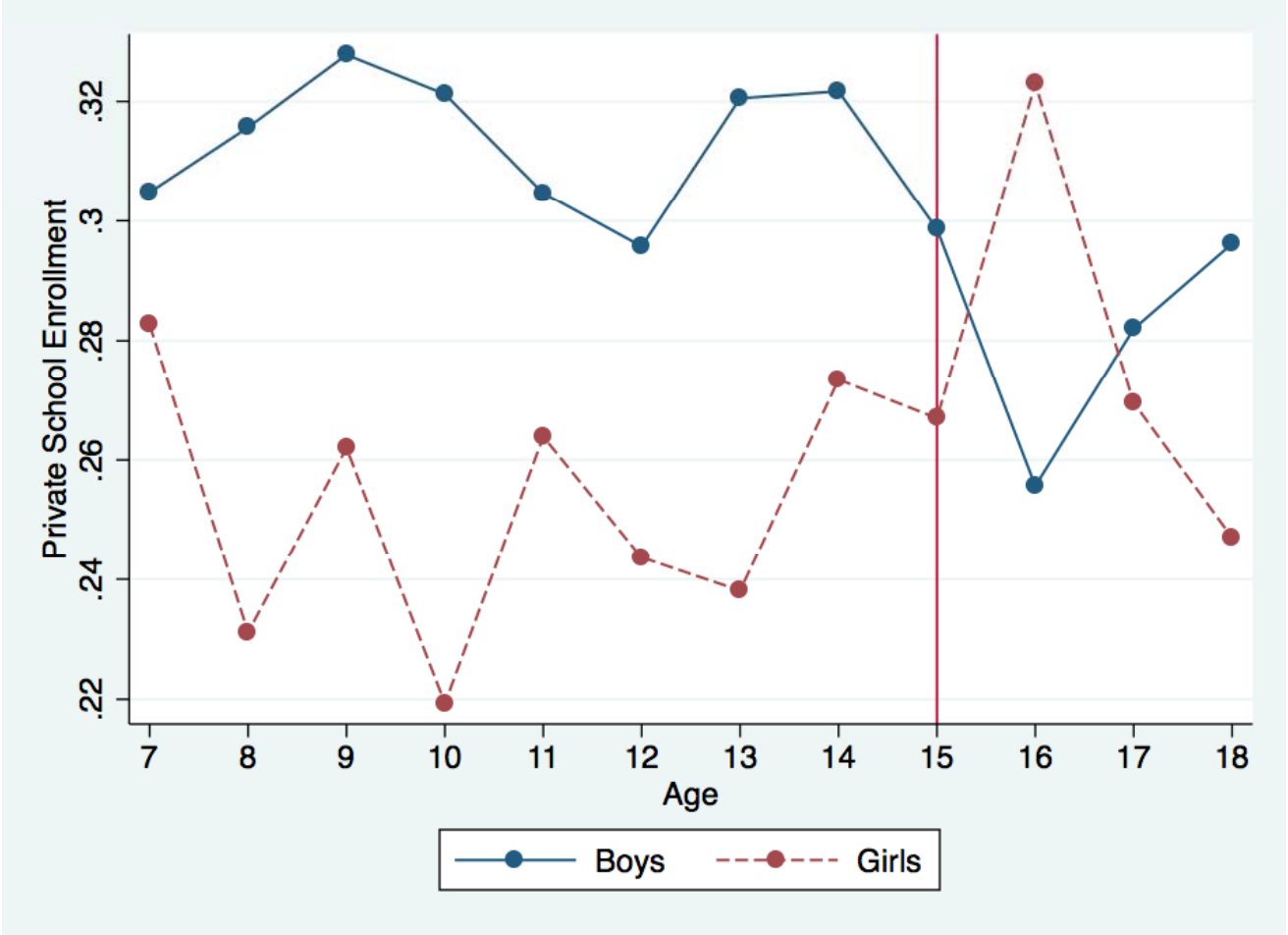
# Data

- This paper primarily uses the data from the Indian Human Development Survey conducted during 2004-2005 (labelled here as IHDS2 data set).
  - This is used for testing hypotheses 1 and 1a
- We also have access to Indian Human Development Survey conducted in 1993-94, which is available only for the rural sample – this is labelled as IHDS1 data-set.
  - We pool IHDS1 and IHDS2 rural samples to test hypothesis 2 pertaining to persistence of gender gap
- We consider children aged 7-18 years old and focus our attention on households with at least two children

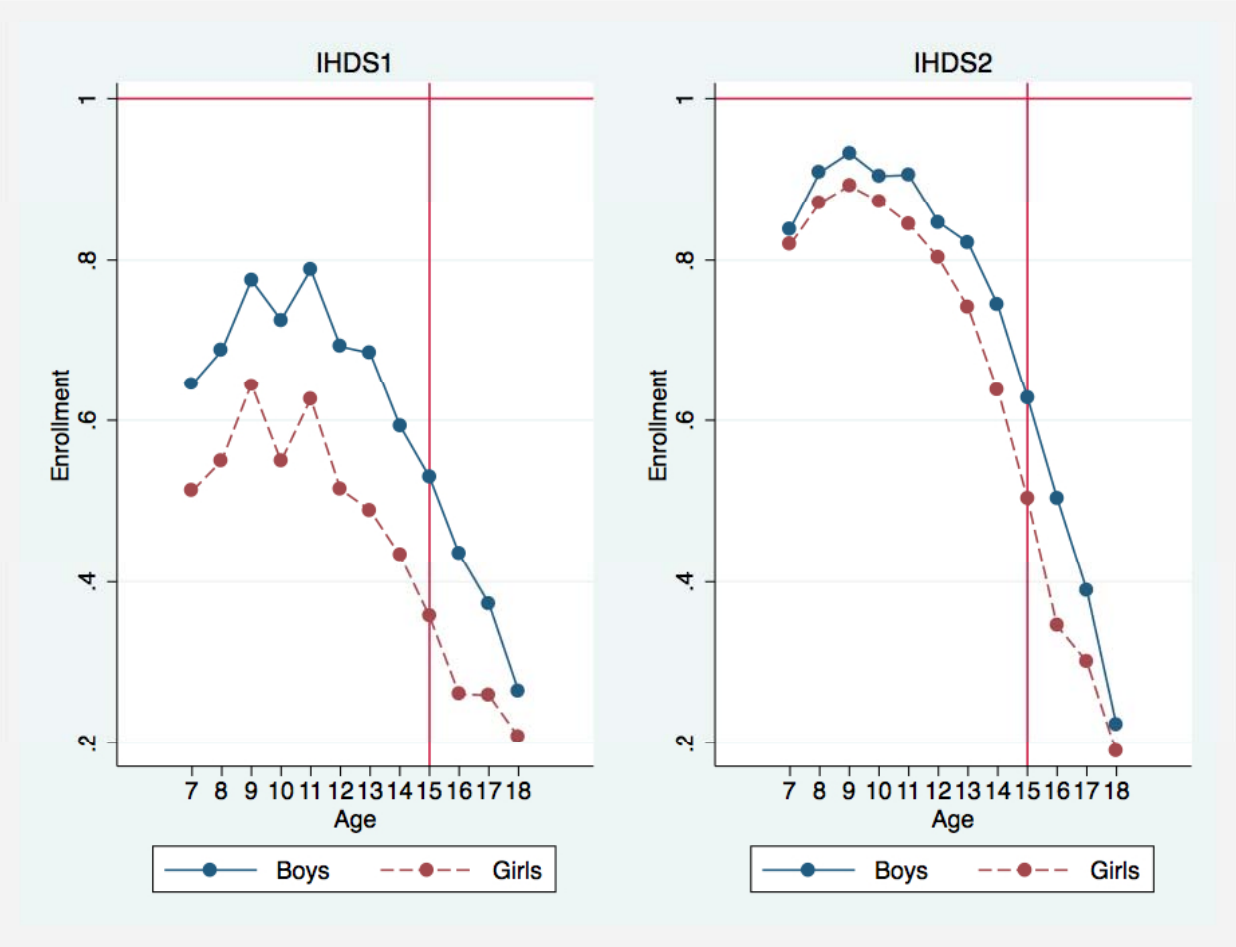
# Gender gap in school enrolment, IHDS2



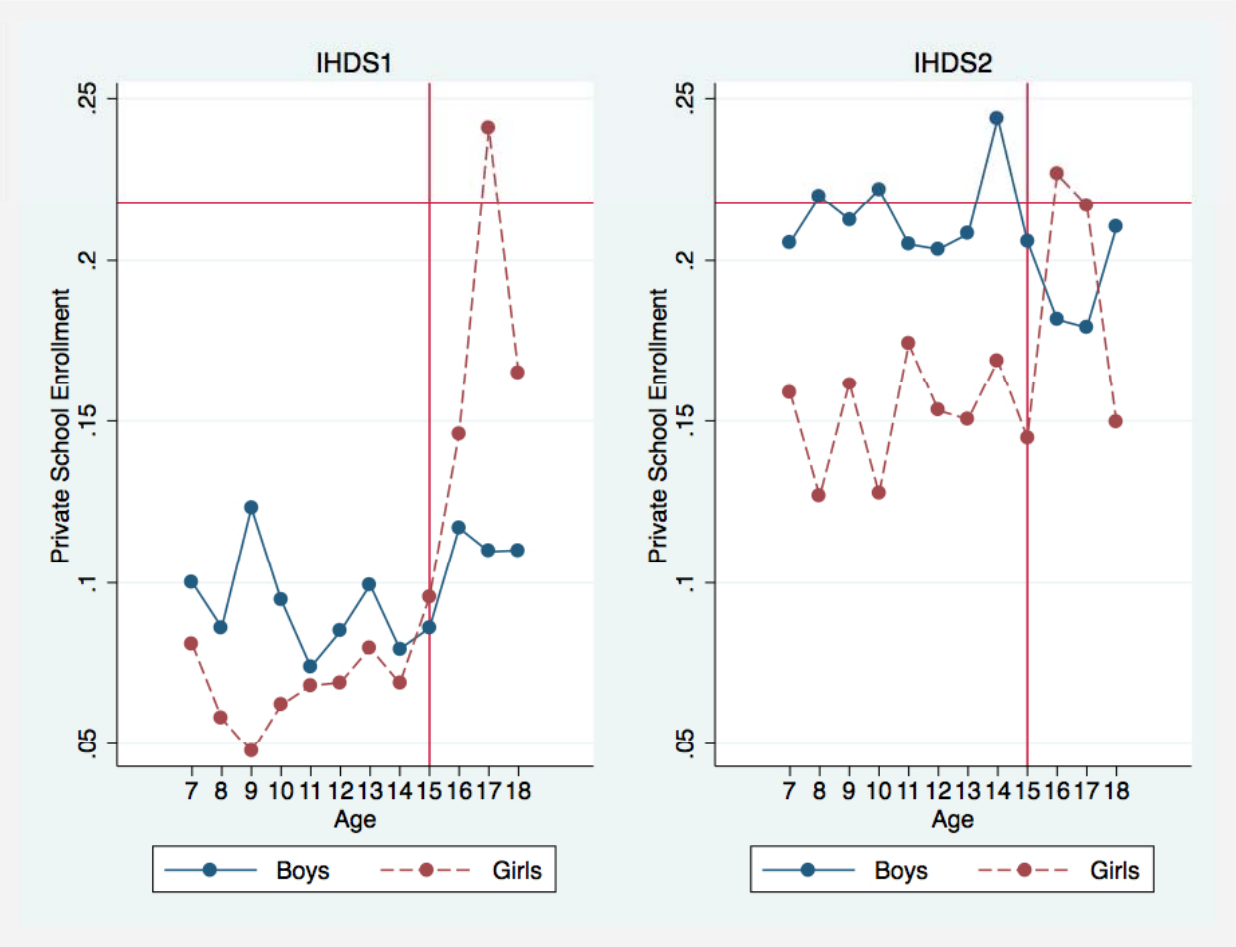
# Gender gap in private school enrolment, IHDS2



# Enrolment in IHDS1 and IHDS2 Rural



# Private school enrolment, rural IHDS1 & IHDS2



# Methodology: Private school choice

- Define $S_{ij}$ as the propensity that the i-th child from the j-th household is enrolled in a private unaided (henceforth private) school at a given point of time. This propensity is determined by the following equation:

$$S_{ij}^{*} = \beta' X_{ij} + \varepsilon_{ij} \quad (1)$$

- $S_{ij}^{*}$ is not observed; We observe $S_{ij}$ such that $S_{ij}=1$ if $S_{ij}^{*} > 0$ and 0 otherwise
- Note however that more than 27% of children aged 7 – 18 are not enrolled in school at the time of IHDS2.

# Selection equation

- Accordingly, private school enrollment (S) is observed only if the child is enrolled in any school (denoted by E) at the time of the survey :

$$E_{ij}^{*} = \gamma' W_{ij} + u_{ij}$$

- (2)

we only observe $E_{ij}$ such that $E_{ij} = 1$ if $E_{ij}^{*} > 0$; $E_{ij} = 0$ otherwise

- Given the binary nature of both the enrolment (E) and private school enrollment (S) variables and also since S is observed when E=1, we use a bivariate probit model with selection to estimate equation (1) determining private school enrolment.
- X and W are the two sets of explanatory variables in equations (1) and (2) respectively; ε and u are the two IID error terms.

# Identifying variable

- For the selection model to be identified, we need at least one variable that affects the probability of enrolment but not that of the school choice decision.
  - the total number of schools per 1000 children in the district is included only in the enrolment equation;
  - it is expected that access to schools would directly affect the probability of enrolment, but not that of the private school choice.
  - Evidently private school choice is a reflection of the state of state schools rather than their number in the district.
- This is confirmed by re-estimating equation (1) by including this variable in the set of explanatory variables. This variable is not statistically significant in the school choice regression.

# Testing for gender gap

- The most conventional way of testing gender bias in private school choice regression is to include a gender dummy (*GIRL*) in the school choice regression equation (1).
- However that gives us the average effect across all households and the effects will be contaminated by the fact that there are some single child households that are likely to be different in many ways from multiple children households.
- Thus in order to fully understand the extent of gender bias within each household we need to restrict the sample to multiple children households.
- One added advantage of focusing on multiple children households is that it allows us to control for household level unobserved heterogeneity that may affect enrolment and school choice of all children in the household, that would otherwise bias the estimates. (All standard errors are clustered at the household level.)
- Further, we distinguish between girls from single and mixed gender households.

# Augmented private school choice equation

- Once we take account of the central variables, the extended school choice equation can be written as:
- (3)

$$S_{ij}^{*} = \beta_0 + \beta_1 * GIRL + \beta_2 MIXED + \beta_3 (GIRL * MIXED) + \gamma' X_{ij} + \varepsilon_{ij}$$

- Other explanatory variables:
  - Age dummy (7-17), each parent's years of schooling, urban, hindu, Musilim, Christian, SC/ST, per capita income/expenditure, total private schools in the district and state dummies

# Problem of Identification of gender gap

- Academic research has not always been successful in identifying gender bias using data from India.
  - For example, Deaton (1997) reviews studies that use the adult goods method and states that there is no evidence that parents' spend more on boys than on girls.
- In this paper, we choose to focus on parental choice between private and state schools, which remains rather unexplored.
- Within households, many factors that contribute to and indeed perpetuate gender bias against girls are not actually observed by the researcher.
- We are therefore left with no alternative but to try to capture the extent of gender bias from observable outcomes.
- In doing so, we control for household, district and state specific fixed effects

# Gender gap in 2004-05

- Girls from single gender households are almost 6 percentage points less likely to attend private school compared to boys from a single gender household, controlling for a full set of other individual and household characteristics and for selection into enrolment.
- The marginal effects corresponding to the *MIXED* dummy in Specifications 2 and 3 however remain insignificant.
- Further, the coefficient estimate of *GIRL* × *MIXED* in specification (3) turns out to be statistically insignificant.
- In other words, there is no evidence from our analysis that there is a significantly differential effect of girls from mixed gender households.

# Selectivity Corrected Marginal Effects of Private School Choice.

| | Specification 1 | Specification 2 | Specification 3 |
|---|---|---|---|
| Girl | -0.051*** | -0.051*** | -0.057*** |
| | (0.006) | (0.006) | (0.014) |
| Mixed Gender Household | | -0.000 | 0.008 |
| | | (0.008) | (0.017) |
| Girl × Mixed Gender Household | | | -0.003 |
| | | | (0.011) |
| Observations | 28917 | 28917 | 28917 |
| Number Enrolled | 20981 | 20981 | 20981 |
| Test of (Girl + Girl × Mixed Gender Household) = 0 | | | 80.39*** |
| Wald Test of Independent equations: $(\rho = 0; \chi^2(1))$ | 19.61*** | 19.54*** | 20.20*** |

# Robustness checks

- We examine the robustness of the selectivity corrected regression results for private school choice in various ways:
  - Computing selectivity corrected estimates of school choice for (a) the poorest (Q1) and the richest (Q4) households (i.e., households in the lowest and highest expenditure quantiles), (b) for low caste and Muslim households, (c) for rural and urban households for all ages with a view to compare these estimates with the full sample estimates.
  - Comparing the selectivity corrected estimates of school choice for the full sample (7 – 18 year olds) with those for the 10 – 14 (upper-primary school age group) and 15 – 18 (secondary school age group) year olds, which allows us to examine if gender difference in school choice arises at a particular level of schooling.
  - Examining if there is any selective discrimination between girls of different birth orders. In doing so, we replace the female gender dummy by two binary variables, namely, eldest girl (*ELDEST*) and higher order/younger/non-eldest (*HIGHER_ORDER*) girls. We also generate two further interaction terms: the eldest girl in a mixed gender household (*ELDEST* × *MIXED*) and higher order girls in a mixed gender household (*HIGHER_ORDER* × *MIXED*).
  - Analysing the inter-state variation in gender gap in private school choice and as such compare the gender gap estimates for different sample states under consideration.

# Robustness of female disadvantage

- We consider the selectivity corrected estimates for private school attendance for different sub-samples: the lowest and highest expenditure quantiles, Muslim households low caste SC/ST households, rural and urban households and also for age groups 10 – 14 and 15 – 18.
- These results confirm that, relative to boys, girls are always disadvantaged (see test of $GIRL + GIRL \times MIXED = 0$). However the strength of the effect varies across the different subsamples: in particular the bias is weak for children aged 15 – 18.
  - In this age category girls from single gender households are treated no differently compared to boys, the interaction term $GIRL \times MIXED$ is however negative indicating a worse total effect for girls.

# Robustness checks – various subsamples

| | Q1 | Q4 | Muslim | SCST | Rural | Urban | Age 10 – 14 | Age 15 – 18 |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Girl | -0.027* | -0.125*** | -0.013 | -0.036* | -0.040*** | -0.060** | -0.063*** | -0.037 |
| | (0.014) | (0.031) | (0.028) | (0.020) | (0.010) | (0.030) | (0.018) | (0.029) |
| Mixed Gender Household | 0.002 | 0.055 | 0.001 | -0.001 | 0.011 | -0.006 | -0.005 | 0.039 |
| | (0.017) | (0.037) | (0.031) | (0.023) | (0.011) | (0.041) | (0.023) | (0.031) |
| Girl × Mixed Gender Household | 0.006 | -0.024 | 0.001 | -0.013 | -0.005 | 0.010 | 0.003 | -0.019 |
| | (0.009) | (0.029) | (0.020) | (0.011) | (0.007) | (0.021) | (0.014) | (0.022) |
| Observations | 6888 | 7494 | 4431 | 8483 | 20319 | 8598 | 14092 | 8443 |
| Number Enrolled | 4215 | 6360 | 2463 | 5792 | 14421 | 6560 | 11652 | 3684 |
| Test of (Girl + Girl × Mixed Gender Household = 0) | 75.56*** | 22.90*** | 5.15** | 28.23*** | 73.17*** | 18.53*** | 72.72*** | 3.75* |
| Wald Test of Independent equations: $(\rho = 0; \chi^2(1))$ | 1.72 | 11.62*** | 0.64 | 5.98** | 9.55** | 8.19** | 2.70 | 2.78* |

# Birth-order effects

- For the full sample, the eldest girl from a single gender household is 3.7 percentage points less likely to attend private school while an younger (higher order) girl from single gender household is 6 percentage point less likely to do so.
- The differential effect of girls from mixed gender households although positive is not statistically significant.
- It therefore follows that a higher order girl in a single gender household is significantly more disadvantaged compared to the eldest girl.

# Birth-order effects

| | Private School |
|---|---|
| Eldest girl | -0.037** |
| | (0.016) |
| Higher order girl | -0.064*** |
| | (0.013) |
| Eldest girl × Mixed Gender Household | 0.006 |
| | (0.019) |
| Higher order girl × Mixed Gender Household | 0.009 |
| | (0.017) |
| Mixed Gender Household | -0.003 |
| | (0.011) |
| Observations | 28917 |
| Number enrolled | 20981 |
| Test of (Eldest girl + Eldest girl × Mixed Gender Household = 0) | 25.76*** |
| Test of (Higher order girl + Higher order girl × Mixed Gender Household =0) | 77.27*** |
| Wald Test of Independent equations: $(\rho = 0; \chi^2(1))$ | 9.93*** |

# Inter-state variation

- Finally we present the marginal effects from the probit regression result for private school attendance by state.
- There is indeed a great deal of variation across the different provinces.
  - The pro-male bias in private school enrolment is more pronounced in the northern states of Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh, Bihar and Madhya Pradesh and considerably weaker in the southern and western states.
  - The *GIRL* dummy is not statistically significant for Gujarat and Maharashtra (the state included in Munshi and Rosenzweig (2009)) in western India and for the southern states of Kerala and Tamil Nadu.
  - For Gujarat, Kerala and Tamil Nadu, there is no evidence that girls are less likely to be enrolled in private schools relative to boys, irrespective of whether the girls belong to single gender or mixed gender households.

# Inter-state variation in gender gap

| VARIABLES | Girl | Mixed Gender Household | Girl × Mixed Gender Household | Observations | Test of (Girl + Girl × Mixed Gender Household = 0) |
|---|---|---|---|---|---|
| Jammu and Kashmir | -0.127 | 0.082 | 0.084 | 488 | 0.77 |
| | (0.099) | (0.101) | (0.108) | | |
| Himachal Pradesh | -0.114** | -0.102* | 0.070 | 917 | 8.89*** |
| | (0.047) | (0.056) | (0.054) | | |
| Punjab | -0.201* | 0.030 | 0.114 | 935 | 8.40*** |
| | (0.107) | (0.072) | (0.119) | | |
| Haryana | -0.115* | 0.008 | 0.019 | 1,475 | 8.97*** |
| | (0.070) | (0.041) | (0.068) | | |
| Rajasthan | -0.175*** | -0.053 | 0.068 | 1,967 | 12.25*** |
| | (0.041) | (0.038) | (0.054) | | |
| Uttar Pradesh | -0.113** | 0.030 | 0.020 | 2,820 | 20.44*** |
| | (0.047) | (0.035) | (0.055) | | |
| Bihar | -0.478*** | -0.226 | 0.927*** | 82 | 0.84 |
| | (0.178) | (0.178) | (0.057) | | |
| Orissa | 0.008 | 0.047 | -0.031 | 921 | 1.13 |
| | (0.047) | (0.033) | (0.048) | | |
| Madhya Pradesh | -0.064* | -0.008 | -0.029 | 2,410 | 23.43*** |
| | (0.037) | (0.027) | (0.042) | | |
| Gujarat | 0.042 | 0.037 | -0.060 | 1,281 | 1.66 |
| | (0.046) | (0.030) | (0.045) | | |
| Maharashtra | -0.001 | -0.007 | -0.033 | 2,092 | 5.90** |
| | (0.039) | (0.026) | (0.043) | | |
| Andhra Pradesh | -0.178*** | -0.030 | 0.075 | 1,287 | 20.47*** |
| | (0.055) | (0.047) | (0.062) | | |
| Karnataka | -0.088*** | -0.062** | 0.052 | 2,195 | 3.00* |
| | (0.033) | (0.030) | (0.042) | | |
| Kerala | 0.021 | 0.015 | 0.026 | 771 | 2.66 |
| | (0.067) | (0.050) | (0.083) | | |
| Tamil Nadu | 0.033 | 0.079** | -0.035 | 917 | 0.06 |
| | (0.041) | (0.039) | (0.042) | | |

# Testing for changes in gender gap over time

- Finally we examine whether the gender bias in private school enrolment has persisted over the period 1993-94 (IHDS1) to 2004-05 (IHDS2).
- We can only test this for the rural sample as only rural households were sampled in both 1993-94 and 2004/05

- (4)

$$S_{ij}^{*} = \alpha_0 + \alpha_1 * GIRL + \alpha_2 MIXED + \alpha_3 (GIRL * MIXED) + \alpha_4 * IHDS2$$
$$+\alpha_5 (GIRL * IHDS2) + \alpha_6 (GIRL * MIXED * IHDS2) + \gamma' X_{ij} + \varepsilon_{ij}$$

# Persistence of gender gap over the decade

- The girl dummy for 7-18 year olds is insignificant in IHDS1, but negative and significant in IHDS2; in other words, ceteris paribus, girls from single gender households were worse off in IHDS2 wrt to private school enrolment
- There is also evidence that 10-14 year girls from single gender households are worse off in both IHDS1 and IHDS2 and the marginal effects are higher in IHDS2.
- There is however no significant gender gap among 15-18 year old mixed gender girls either in IHDS1 or IHDS2; thus the pro-male gender bias ceases to exist for the sample of 15 – 18 year olds .
- These results seem to suggest that significantly lower likelihood of private school enrolment among 7-18 year olds in 2004-05 has been dictated by the presence of gender gap among 10-14 year olds in 2004-05.
  - The latter may highlight the dominant effects of declining skilled wages for women (relative to positive effects of growth and reforms over the period), especially in the rural sectors of the economy.

# Persistence of gender gap – pooled results

| | Full Sample | 10-14 Yrs old | 15-18 Yrs old |
|---|---|---|---|
| Girl | -0.007 | -0.029 | 0.057 |
| | (0.012) | (0.022) | (0.118) |
| Girl × Mixed Gender Household | -0.006 | 0.019 | -0.037 |
| | (0.013) | (0.028) | (0.082) |
| Mixed Gender Household | -0.008 | -0.015 | 0.002 |
| | (0.008) | (0.024) | (0.019) |
| Girl × IHDS2 | -0.046*** | -0.029 | -0.119 |
| | (0.013) | (0.053) | (0.264) |
| Girl × Mixed Gender Household × IHDS2 | -0.005 | 0.006 | -0.023 |
| | (0.010) | (0.014) | (0.052) |
| Mixed Gender Household × IHDS2 | 0.027 | -0.011 | 0.129 |
| | (0.019) | (0.024) | (0.226) |
| IHDS2 | 0.148*** | 0.188 | 0.241 |
| | (0.038) | (0.154) | (0.445) |
| Observations | 43779 | 21204 | 12520 |

# Conclusion

- There is now a general consensus that gender discrimination is detrimental to development and growth
- It is thus important to identify the presence and persistence of discrimination against women, with a view to formulate appropriate policy to address this.
- Ceteris paribus, there is evidence of significant gender gap (about 6 percentage point) in private school enrolment in single gender households;
- The gender gap is not significant for girls from mixed gender households – evidence of altruism?
- Also, the gender gap is insignificant for 15-18 year old girls from single gender households: differentiated demand for private schooling?
- Further, there is evidence that relative to the initial year 93/94, the female disadvantage is more pronounced in 2004/05, especially for 10-14 year old girls from single gender households: gender gap in returns to private schooling in rural areas?

# Policy implications

- While growth and poverty reduction can help everyone including women, it is not sufficient for fighting gender gap, especially that for private school enrolment
- Thus policies seeking to improve women's labour market opportunities, relative returns to women's skills, ensuring women's political and inheritance rights (that strengthen women's position outside marriage) are likely to strengthen women's position in the family and therefore their decision making ability;
- There is however no guarantee that women's empowerment by itself will necessarily improve allocation of resources towards girls' private schooling. Thus more direct policies targeting girls' private schooling may be considered
  - Discounted fee or voucher scheme to encourage girls' private school enrolment, which in turn may help girls to fully reap the benefits of emerging India.
  - Other policies may include provision of more autonomy to state schools which makes schools more accountable to teachers and may thus improve learning.