Expanding Education Market and Parental Choice for Secondary Schools in India: Evidence from IHDS Data

Pradeep Kumar Choudhury

1 Introduction

The contribution of education to development and socio-political transformation of societies is widely recognised all over the world. In addition to direct contribution of education to economic growth and development (as discussed in human capital theory), it also produces many externalities that contribute to building a better society in terms of making an individual capable and self-reliant. It plays a critical role in human development and enables the development of human capabilities required for overall progress of the society. Education produces an array of social benefits such as reduction of poverty, improvement in income distribution, reduction in crime, improvement in the health status of the population and better life expectancy, rapid adoption of new technologies, strengthening of democracy, ensuring civil liberties (Tilak 1994a, 2004). Further, it has the effect of releasing the disadvantaged from the bondage of serfdom and inequality and help them achieve higher social mobility (Singh 2016: 1). Education is considered as an enabling factor for social prosperity and political stability and is, therefore, increasingly being viewed as an instrument of development, a foundation for the exercise of human rights and building human capabilities. It contributes to the prosperity and stability of democratic societies through creating well-informed citizens (Friedman 1955). Education is considered as a public good, as a merit good, as a human right and as an investment, a critical investment for individual as well as national progress. It works as a powerful instrument for socio-economic development of the nation and for building a strong and vibrant knowledge society (Tilak 2018). Therefore, education plays a critical role in accelerating economic growth, reducing inequalities, achieving socio-political transformation of societies, and overall prosperity of the nation.

P. K. Choudhury (✉)
Zakir Husain Centre for Educational Studies, School of Social Sciences, Jawaharlal Nehru University, New Delhi 110067, India
e-mail: pradeepchoudhury@jnu.ac.in; pradeep.hcu@gmail.com

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Secondary education is a crucial stage in the educational hierarchy as it serves as the gateway to access higher education and also prepare the youth to join the world of work (Mishra 2015). It is well argued that providing access to secondary education is essential to ensure the continuation of reforms, aimed at achieving economic growth and development and also in realising the goals relating to universal primary education as the children completing primary education expect to pursue secondary education (UNESCO 2013). It serves as a bridge between primary and higher education and is considered an important segment of the school education system. Further, access to secondary education is linked with economic and social development and is considered as one of the strongest instruments for improving health, gender equality, peace and stability in society. The study by Lewin and Caillods (2001) reveals that secondary education promotes the development of a skilled and knowledgeable citizenry through formal reasoning, critical thinking and problem-solving skills. It contributes to students mastering literacy, numeracy and acquiring an understanding of the world around them. Tilak (1989, 2007) has argued that secondary education has a significant effect on the redistribution of income, promoting growth and reducing poverty as compared to primary education. It plays a critical role in transforming the economy, fostering social justice and ensuring a higher quality of life, by increasing the social, occupational and economic levels of the households.

With the realisation that secondary education plays a crucial role in development of the society, India has witnessed a significant expansion of this sector in post-2000s. In 2016–17, there were about 249,089 institutions offering secondary (including senior secondary) education to around 62 million students in India. An important feature of secondary education in India is a high proportion of private schools—government-supported private institutions and, more importantly, private-unaided institutions as a proportion of all schools. The share of private-unaided secondary schools (Grade 9–12) is 33%, accounting for an enrolment share of 35% in 2016–17 (U-DISE Flash Statistics 2016–17, NIEPA 2018). The world's largest experiment in private education is being run in India today as large shares of its population are attending private schools (Tabarrok 2013: 11). The expansion of private schools in India is instrumental in its gaining popularity among poor households while challenging the hegemony of the middle class who used to monopolise these schools. Many poor parents use their scarce resources to send their children to private schools in India (Muralidharan and Sundararaman 2015).

In the era of growing incidence of private schooling, several studies have examined the determinants of private versus public school choice, both in the Indian and international contexts (Alderman et al. 2001; Tilak and Sudarshan 2001; Glick and Sahn 2006; Muralidharan and Kremer 2008; Nishimura and Yamano 2013; Yaacob et al. 2014; Kumar 2018). The parental preference is changing from just attending school to seeking quality education that works as a reliable conduit to higher education as also to enter the job market and this preference applies to even rural areas and among urban poor. The aspiration for English as medium of instruction among poor households is considered as a key factor that drives demand for private schooling in India. This is largely due to the linkage that such households associate between the English knowledge, middle-class jobs, social distinction and elite status

(De et al. 2002; Dixon and Tooley 2005; Nambissan 2012; Tabarrok 2013; Singh 2015). The study by Singh (2015) finds a substantial positive effect of private schools on English learning in the rural areas of Andhra Pradesh. Similarly, Thorat (2011) has pointed out that teacher absenteeism and negligence in government schools have led to this trend. The increasing popularity of fee-charging private schools in India is due to parental dissatisfaction with government schools (Desai et al. 2009; Karopady 2014). Kingdon (1996), in fact, argues that the rising income of the households and the breakdown in the quality of government schools are the two possible reasons for the growth of private schools. The importance of quality schooling on subsequent investments on education and labour market outcomes is well recognised in studies on the new economics of education. Parents believe that private schools can provide a better future for their children by providing quality education, which motivates them to make necessary investments in private school education for their children (Galab et al. 2013; Bhattacharya et al. 2015).

It is well observed that the proliferation of private schools, along with several other important policy interventions on school education, has brought changes in parental choice with regard to schools system in India. There is also changing institutional space within which households make decisions about the choice of schooling. The private schools, that were earlier catering to the needs of elites and the middle class, are now growing to meet the demand of poor households. Several studies reveal that low-fee private schools (LFPS) are considered as popular choice among poor parents in India as these are conveniently located within poor settlements and, hence, are easily accessible, especially for girls (Tooley and Dixon 2007; Srivastava 2008; Nambissan and Ball 2010; Harma 2011). Figlio and Stone (2000) have argued that parents, who send their children to LFPS, may care about other outcomes, such as discipline, extra-curricular activities, religious matters and strengthening the social capital by interacting with peer group. However, there is little empirical evidence to examine parental choice for schools in the complex social and institutional contexts, despite the availability of few studies on private schools in India. Until recently, the literature on private schools in India has been dominated by mapping its expansion across States; and studies on school choice and parental demand for private schools are quite limited. Though there are few works on expansion of private schools, choice between private and government schools is of relatively recent origin and needs further investigation. Also, available studies in these areas in India have largely focussed on lower level of schooling, and there is hardly any work on secondary schools. Using IHDS data, this paper seeks to address two important questions in this context. First, it examines the changing trend and pattern of demand for private secondary schools in India between 2005 and 2012. Second, the study explores the factors that parents consider important in making their choice for secondary schools. To capture the heterogeneity in parental choice for schools, I analyse here the effects separately for region (rural/urban), gender and economic status of the households. This study contributes to the existing literature by examining parental choice for schools at secondary level, as the available studies in this area have largely focussed on the lower level of schooling. From a broader perspective, the paper also relates

to the recent developments in the literature on private sector's intervention in school education in India and how it has changed the educational landscape in India.

The rest of the paper is organised as follows. Section 2 describes the data set and methodology used for the study. The results and findings of the study are discussed in Sect. 3. The descriptive analysis, in the first part, explains the changing trends and pattern of demand for private secondary schools in India between 2005 and 2012. Using probit regression, the second part of the discussion focusses on the determinants of parental choice for private secondary schools. Section 4 discusses major policy implications of the study and concludes.

2 Data and Method

2.1 Data

This paper has used individual-level unit record data from two rounds of India Human Development Survey, designed jointly by the University of Maryland, USA, and the National Council of Applied Economic Research (NCAER), New Delhi in 2005 (IHDS-I) and 2012 (IHDS-II). These are nationally representative, multi-subject surveys of the households located in both rural and urban areas covering 33 States and Union Territories of India, with the exception of Lakshadweep and Andaman and Nicobar. IHDS-I covered 41,554 households located in 1503 villages and 971 urban neighbourhoods. Similarly, IHDS-II covers 42,152 households residing in 1420 villages and 1042 urban habitats. This is a panel data set in which around 83% of the households covered in 2005 were re-interviewed in 2012, and the response rates were more than 90% for both the rounds. IHDS has broad spectrum of information on several socio-economic aspects such as education, health, employment, poverty, gender relations, social capital, etc. On education, IHDS rounds provide detailed information, both at household and individual levels. At the individual level, particularly for those in school/college, it provides information on household investment in education, study environment in institution, outcome variables like reading-writing-arithmetic skills, and, most importantly, choice of institutions by the households. Unlike other national level data sources (e.g. NSSO), IHDS offers a greater scope to study the dynamics of school choice by relating it with several other socio-economic and institutional characteristics.

2.2 Measure of Secondary School Choice

Since the primary interest of the paper is to understand the parental choice for secondary schools, we limit the analysis to the children who are currently enrolled in secondary education (Classes 9–12). This includes 9582 children in 2005 and 13,363

in 2012 with more than 90% of them falling in the age bracket of 14–18 years. The original IHDS data in both the rounds classify schools as EGS, government, government-aided, private, convent, Madrassa and other/open schools. The descriptive analysis takes into account the three broad types of schools that are available in the survey: government, government-aided and private. The private schools also include convent schools for the analysis. However, for empirical exercise, we do not differentiate between government and government-aided schools, instead we combine them as government schools and the rest as private school.

There are three different types of schools in India with respect to management: government schools, private-aided (also referred as government-aided private schools) and private-unaided schools. The government schools are owned, funded and managed by the government. Teachers are hired and allocated to individual schools by the department of education. The private-aided schools are essentially quasi-government in nature—run by private management, but have teaching staff funded by the government and follow Grant-In-Aid codes. They are akin to government schools in many respects, following the same curriculum, syllabi, textbooks, eligibility criteria for teacher appointment and many other rules and regulations of the government (Tilak 1994b; Mehrotra and Panchamukhi 2007). The private-unaided schools are fee-charging schools run by private management and receive no grants or aid from the State, but they might receive public subsidies in the form of tax concessions and concessions in tariffs covering land, building and electricity. These schools are entirely self-financing but are recognised by the State and follow regulations laid down by the State. The fully private unaided schools have complete autonomy in management, hiring of teachers and non-staff, etc. Besides these three broad categories, there are also private-unaided schools that are 'unrecognised' and do not comply with government regulations. Unlike earlier studies, this chapter makes a clear distinction on the state of private unaided schools in India as they seem to open school choices beyond public funded schools as well as a new destination of market for education.

3 Method

The parental choice for secondary schools and its variations across different socio-economic groups in India are examined in the paper, using both descriptive statistics and probit model. The probit estimations are based on unweighted data, while household level weights are used for the descriptive statistics. The descriptive figures are given for both 2005 and 2012 to understand the changing pattern of the choice for secondary schools while the probit results are estimated using the sample of 13,363 secondary school-going children obtained from IHDS II data. Whether the child has enrolled in a government or private secondary school (*Secschool_Choice*) serves as the dependent variable in the analysis. The *Secschool_Choice* is defined as a dummy variable, as follows:

$$Secschool\_Choice = 1, \quad \text{if the child is enrolled in a private secondary school}$$
$$= 0, \quad \text{otherwise.}$$

To understand the dynamics of school choice at secondary level, seven probit regression models are estimated: overall, gender (male/female), region (rural/urban) and economic status of the households (poorest/richest). The set of explanatory variables included in the probit model is gender, region (rural/urban), social category, household head's education, household head's occupation, household asset, current grade of the student, and number of male and female children (in the age group of 0–14 years) in the family.[1] The choice of these explanatory variables for the probit models is influenced by the availability of data, and the findings of the previous studies on demand and choice for schools, both in the Indian and international contexts. It is expected that socio-economic, demographic and institutional factors have considerable influence on choice of secondary schools in India, particularly with the increasing role of private sector in school education. Therefore, a few important variables are included in the probit models to capture the dynamics of school choice in the secondary level, and the estimation results are shown in Table 1.

4 Results and Discussion

4.1 Changing Pattern of Demand for Private Schools: Descriptive Results

This section discusses the changing pattern in the demand for private secondary schools between 2005 and 2012. To analyse this, the share of students enrolled in government, government-aided and private schools by important individual and household characteristics (gender, social category, region, household asset and household head's education) are calculated and shown in Tables 2, 3, 4, and 5 in appendix. Though the schools are categorised into three to get the picture better, the discussion here has focussed on the changing pattern of demand for private secondary schools vis-à-vis government secondary schools between 2005 and 2012. In 2005, around 27% of the students had enrolled in secondary school which has gone up to about 31% in 2012 (Fig. 1). Interestingly, the increase in the demand for secondary education in private schools varies with few important socio-economic characteristics discussed in the paper.

[1] For details on the variables used in the regression, see Table 6 in the appendix. Summary statistics of the variables used in the probit estimation is given in Table 7.

Table 1 Determinants of participation in secondary private schools: probit estimates

Variables	All	Male	Females	Rural	Urban	Poorest (Q_1)	Richest (Q_5)
Gender_female	−0.0388***	–	–	−0.0377***	−0.0386***	−0.0317	−0.0540***
	(0.00740)			(0.00876)	(0.0130)	(0.0208)	(0.0167)
Region_urban	0.107***	0.0987***	0.117***	–	–	0.0784	0.183***
	(0.0104)	(0.0145)	(0.0149)			(0.0568)	(0.0209)
HH asset quintiles							
Assets_Q_2	0.00175	0.00551	−0.00639	0.0153	−0.0333		
	(0.0146)	(0.0195)	(0.0217)	(0.0138)	(0.0658)	–	–
Assets_Q_3	0.00321	0.0174	−0.0125	0.0292**	−0.0274	–	–
	(0.0149)	(0.0205)	(0.0218)	(0.0148)	(0.0629)		
Assets_Q_4	0.0747***	0.1000***	0.0476**	0.0780***	0.0960	–	–
	(0.0159)	(0.0219)	(0.0231)	(0.0167)	(0.0625)		
Assets_Q_5	0.214***	0.243***	0.185***	0.202***	0.245***	–	–
	(0.0184)	(0.0252)	(0.0269)	(0.0214)	(0.0634)		
HH head occupation							
Agri_allied	−0.0285**	−0.0249	−0.0322*	−0.0191	−0.0586*	−0.105*	0.0126
	(0.0117)	(0.0163)	(0.0168)	(0.0143)	(0.0299)	(0.0588)	(0.0271)
Wage_labour_others	−0.0519***	−0.0516***	−0.0532***	−0.0479***	−0.0540***	−0.0257	−0.0530***
	(0.0100)	(0.0140)	(0.0143)	(0.0147)	(0.0142)	(0.0601)	(0.0191)
Social groups							
OBC	−0.0261**	−0.0380***	−0.0109	−0.0238*	−0.0236	−0.00320	−0.0804***
	(0.0106)	(0.0146)	(0.0154)	(0.0128)	(0.0183)	(0.0419)	(0.0214)

(continued)

Table 1 (continued)

Variables	All	Male	Females	Rural	Urban	Poorest (Q_1)	Richest (Q_5)
SC	−0.0995***	−0.106***	−0.0918***	−0.0847***	−0.118***	−0.0566	−0.224***
	(0.0115)	(0.0163)	(0.0162)	(0.0139)	(0.0202)	(0.0440)	(0.0264)
ST	−0.0888***	−0.109***	−0.0634**	−0.0781***	−0.0841**	−0.0802	−0.0580
	(0.0181)	(0.0253)	(0.0258)	(0.0205)	(0.0371)	(0.0488)	(0.0618)
Muslim	−0.0438***	−0.0390*	−0.0472**	−0.0427**	−0.0330	−0.0492	−0.0360
	(0.0146)	(0.0208)	(0.0205)	(0.0198)	(0.0223)	(0.0587)	(0.0309)
OMR	0.0720***	0.0498	0.101***	0.0965***	0.0208		0.0416
	(0.0260)	(0.0353)	(0.0384)	(0.0345)	(0.0396)		(0.0354)
HH head education							
Primary_UP	0.0174	0.0352**	0.000366	0.00394	0.0338	0.00922	−0.107**
	(0.0114)	(0.0155)	(0.0168)	(0.0122)	(0.0269)	(0.0237)	(0.0536)
Secondary	0.0441***	0.0394**	0.0513***	0.0288**	0.0492*	0.0726*	−0.0245
	(0.0132)	(0.0179)	(0.0195)	(0.0146)	(0.0290)	(0.0411)	(0.0534)
Higher_Secondary	0.0600***	0.0560***	0.0660***	0.0581***	0.0478*	0.0524	0.00470
	(0.0139)	(0.0190)	(0.0204)	(0.0160)	(0.0290)	(0.0464)	(0.0531)
Graduate	0.117***	0.120***	0.114***	0.0638***	0.153***	0.104	0.118**
	(0.0152)	(0.0210)	(0.0221)	(0.0186)	(0.0295)	(0.0710)	(0.0524)
NCHILDM	0.00380	0.00354	0.00632	−0.000479	0.00834	−0.00928	0.0350***
	(0.00434)	(0.00606)	(0.00635)	(0.00505)	(0.00806)	(0.0119)	(0.00987)
NCHILDF	−0.00456	−0.0150**	0.00283	−0.00747	−0.00206	−0.0132	−0.0104
	(0.00415)	(0.00671)	(0.00535)	(0.00471)	(0.00805)	(0.0111)	(0.0104)

(continued)

Table 1 (continued)

Variables	All	Male	Females	Rural	Urban	Poorest (Q_1)	Richest (Q_5)
Grade_level	0.00386	0.00590	0.00276	0.0135***	−0.0128**	0.00519	−0.0303***
	(0.00342)	(0.00485)	(0.00494)	(0.00405)	(0.00599)	(0.00982)	(0.00740)
Log-pseudo likelihood	−6629.0908	−3625.2864	−2966.3916	−3826.7442	−2674.0597	−448.2377	−1926.5537
Pseudo R^2	0.1829	0.1828	0.1848	0.1632	0.1851	0.1991	0.1305
Observations	13,005	6,960	6,024	8,203	4,788	1,129	3,215

Source Author's calculation from the unit-level record of IHDS II
Notes (a) Estimation gives the marginal effects and (b) figures in parenthesis are standard errors
*** p<0.01, ** p<0.05, * p<0.10

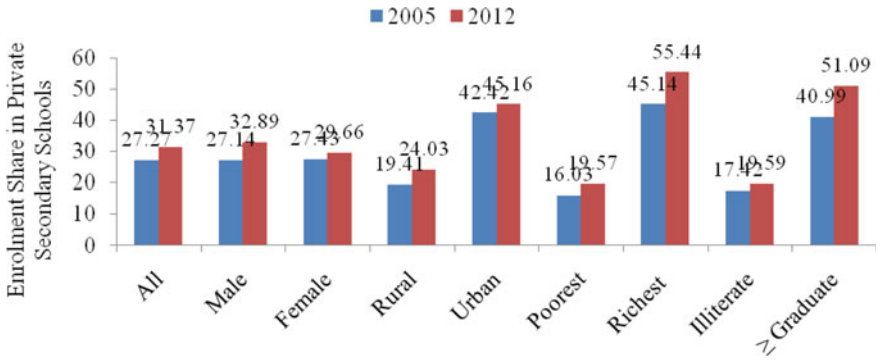

Fig. 1 Changing enrolment pattern in private secondary schools in India, by major socio-economic factors. *Source* Estimated by the author based on unit level of data available from IHDS (2005 and 2012)

There is six percent increase in enrolment in private secondary schools among male students (27.1–32.9%), while this is around two percent for females (27.4–29.6%) between 2005 and 2012. This confirms the pro-male bias in household investment on education (and, therefore, the choice of schools) as found in some earlier studies, particularly in the context of rural India (Himaz 2009; Azam and Kingdon 2013; Saha 2013; Kaul 2018). In 2012, close to half of the students were enrolled in secondary private schools in urban areas, while this was around 24% in rural areas (Fig. 1). However, it is quite surprising to note that the increase in the enrolment in private secondary schools between 2005 and 2012 is higher in rural areas (4.62%) as compared to urban areas (2.74%). This, perhaps, reveals the changing dynamics in the demand for schools in rural areas, as discussed in some of the recent works (Karopady 2014; Singh 2015). The other important household characteristic, that is associated with the variation in the demand for private secondary schools, is the educational level of the household head. Around 20% of the students, whose household heads education is below primary, have enrolled in private schools, while this figure is 51% for the households whose heads have completed graduation and above (Fig. 1).

Paying capacity of the households plays an important role in accessing private schools in India as they charge very high fees and also parents spend a significant share of their income on many other non-fee items such as transport, stationary and school uniform. This is significantly visible in the analysis, as the demand for private secondary schools has increased with the increase in economic status of the households measured in terms of asset quintiles in both 2005 and 2012 (Fig. 2). The enrolment of students in secondary private schools is 2.83 times higher for the richest households (top asset quintile) as compared to the poorest households (bottom asset quintile) in 2012, and this was 2.81 times in 2005 (Table 4). Further, the gap in the enrolment in private secondary schools has widened between 2005 and 2012 (10.3% among the richest households and 3.54% among the poorest households). Therefore,

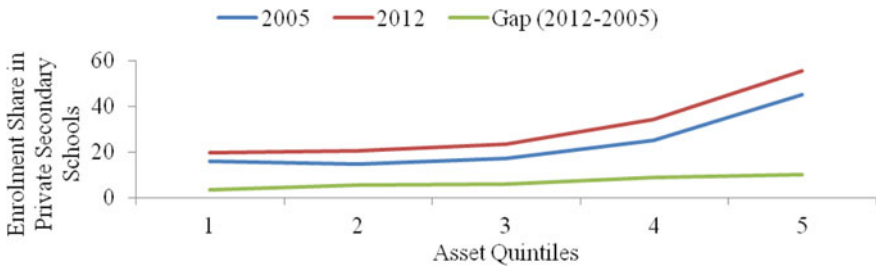

Fig. 2 Changing enrolment pattern in private secondary schools in India, by household asset quintiles. *Source* Estimated by the author based on unit level of data available from IHDS (2005 and 2012)

over the years, the private schools are accessible to rich in greater numbers, and this further widens the economic inequality in society.

The variations in the demand for private secondary schools by social category reveal some interesting pictures. The enrolment share in private secondary schools for the household belonging to HUC, OBC, SC and OMR has gone up between 2005 and 2012, while there is a very negligible increase for ST households. The highest increase in the enrolment is among OBCs (7.32%) followed by SCs (5.65%) and HUCs (4.45%). Quite surprisingly, the enrolment share in private schools among Muslim households has declined from 31.25 to 29.65% in this period (Table 5). The changing pattern in the demand for private secondary schools clearly supports the larger argument that the expansion of private schools in India is benefiting the households with better socio-economic and cultural capital.

5 Empirical Results: Probit Estimates

5.1 Choice of Secondary Schools by Gender

Gender inequality in private school enrolment is typically attributed to a selection bias towards boys wherein low-resource households that cannot afford to send all of their children to private schools choose to enrol boys over girls (Mcloughlin 2013). It is argued that parents may prefer to send boys to private schools for receiving quality education because of underlying socio-economic and cultural factors in India. Private schools are costly and, thus, may increase the discrimination against girls in India where preference for sons prevails widely. Several studies have examined the issue of gender disparity in overall access to schools, grade progression and household investment on education in developing countries, including India (Alderman and King 1998; Aslam and Kingdon 2008; Glick 2008; Azam and Kingdon 2013; Saha 2013; Sahoo 2017). However, there are very few studies on girl's access to private schools in India, despite their massive expansion in recent years. The literature on

gender-based discrimination in private schooling is limited in the context of India (Maitra et al. 2016). There is little empirical evidence on parental choice for schools by gender using national level household surveys in India. Furthermore, few recent studies on this (Woodhead et al. 2013; Sahoo 2017) have focussed on lower levels of school education. Therefore, looking at the choice of secondary schools by gender adds to a smaller set of recent research on gender gaps and private school enrolment trends in India.

The probit estimates find that female students are 3.8% points less likely to be enrolled in private secondary schools than boys; and this difference is more in the rural areas. The households belonging to rural areas are 3.7% points less likely to send girls to private schools as compared to 3.9% points in urban areas, accounting for an intra-regional gap of 0.2% points. This result confirms the descriptive statistics shown in Table 2, that is around one-third of male students access private secondary schools in comparison to 29.6% among females. Gender gap in attendance in private school was also evident in the study by Woodhead et al. (2013) in Andhra Pradesh. Azam and Kingdon (2013) find a difference in household expenditure on education by gender and have argued that boys are more likely to be sent to private schools and, therefore, households invest more on them to provide better quality education. Using World Bank's Living Standards Measurement Study (LSMS) in Uttar Pradesh, Sahoo (2017) shows that there is an intra-household gender bias (pro-male) of six percentage points in private school enrolment among children, aged 6–16 years, and, more importantly, it is rising over time. Socio-economic and cultural factors play a critical role in the pro-male bias in the matter of accessing private schools in India. Daughters receive less human capital investment than sons as parents inherently place a relatively low value on females in India (Kingdon 2005; Sahoo 2017). Besides, it is argued that parents have a preference for better quality education for boys (by investing more) over girls. These findings bring out 'gender equity' as a matter of serious concern in the access to private secondary schools, particularly in rural India.

Two probit models are estimated for male and female samples separately for a detailed examination of gender bias in private secondary school enrolment. For both male and female samples, urban households are more likely to send their children to private schools as compared to rural households. However, the effect is higher among female students (11.7% points) than male students (9.8% points). This reveals that pro-male bias in the demand for private secondary schools is quite strong in rural areas vis-à-vis the urban areas. Gender inequality in the secondary school choice between poor and rich households in India reveals that even the richest households (quintile 5) are 5.8% points more likely to send their male children to private schools than the poorest households (quintile 1). Similarly, the girls of Scheduled Caste (SC) and Scheduled Tribe (ST) households have less probability in getting access to private schools than the boys of the same social category. The girls of SC and ST households are doubly disadvantaged in being girls and also belonging to lower social groups. However, quite interestingly, the results find that the household head's education plays a critical role in minimising the intra-household gender bias in accessing private secondary schools in India. Households, with educated heads, have a higher

probability of sending their female children to private schools as compared to illiterate households. For example, household heads with secondary level of education are 5.1% points more likely to send their girl children to private schools than the illiterate household heads, while this probability is 3.9% points among males. This may be due to the increased awareness level among the educated parents towards providing quality education to female children and, therefore, minimising gender bias in the school choice.

5.2 Choice of Secondary Schools by Region

There is a striking difference in the choice for private schools among the rural and urban households. The findings show that urban households are 10.7% points more likely to attend private schools than rural households. This may be due to the fact that the parents in urban areas are well aware of the importance of education for their children (therefore ready to invest more on their children) as compared to households from rural areas. Also, private schooling is much more spread in urban than in rural areas, making physical access more challenging (Kingdon 2017). The study by Woodhead et al. (2013) finds that the largest single factor affecting a child's chances of attending a private school is living in an urban area.

The rich–poor gap in the probability of attending private secondary schools is found to be higher in urban areas than in the rural areas. The richest households in urban areas are 24.5% points more likely to send their children to private secondary schools than the poorest households, while in rural areas this is 20.2% points. Similarly, with the increase in the household head's education, students of urban areas have relatively higher chances of attending private secondary schools as compared to rural households. The children of households, with their heads' education level being graduation and above, have 15.3% points higher probability of attending private schools than the illiterate household heads, while this figure is 6.4% points in rural areas. The other important factor that plays a critical role in the dynamics of school choice between rural and urban households is the social groups. Though in both rural and urban areas, students belonging to SC and ST households have less chance to access private secondary schools, the effect is higher in an urban set-up. For example, students of ST households have 8.4% points less chance to attend private schools in rural areas, while this is 11.8% points in urban areas. This may be due to the fact that the cost of attending private schools in urban areas is very high and, as such, it becomes really difficult for SC and ST households to access these schools. However, the caste dynamics in the school choice between rural and urban regions is an important issue and need further analysis.

The relationship between current grade (may be considered as a proxy of age of the child) of the child and enrolment in private secondary schools in rural and urban regions reveals some interesting results. The increase in the student's grade reduces the probability of accessing private secondary schools in urban areas while it is positively related in the rural areas. This may be due to the fact that households

prefer to send their children to private schools at an early age in urban areas and continue there till Grade 12. However, parents in rural areas enrol their children in government schools at the secondary level (Grades 9 and 10) and transfer them to private schools as they reach the higher grade (Grades 11 and 12), as Grade 12 results largely decide the future career path, including access to higher education. A detailed analysis, particularly tracking the student enrolment by school type, may reveal some interesting results, which is, however, outside the scope of this paper.

5.3 Secondary School Choice Between Poor and Rich Households

Household wealth (measured by the household asset) has emerged as an important determinant in the choice of secondary schools in India. Probit results show that students from the richest families (quintile 5) have higher probabilities of accessing private secondary schools than those belonging to the poorest households (quintile 1). The students belonging to the richest households (top asset quintile) have 21% points higher probability of accessing private secondary school as compared to those from the poorest households, and the coefficient is statistically significant at one percent level. Similarly, students of fourth asset quintile households (second richest group) have seven percentage point higher probability of sending their children to private secondary schools as compared to the poorest households. In 2011–12, only about 19% of the students from the poorest households were sending their children to private schools, while it was more than 55% for the richest households (top asset quintile). In 2004–05, these figures were 16% and 45% respectively (see Table 4). The study by Harma (2011) concludes that private schools are by no means accessible to poor households due to the high fees charged by them. Similar result was also found in the study by Woodhead et al. (2013) in the context of Andhra Pradesh. But to address the expanded demand, private schools are extending their reach to lower and lower middle-income families by opening low-fee private schools. To understand the issue better, two separate probit models are estimated for the top and bottom asset quintiles (columns 7 and 8, Table 1). Interestingly, pro-male bias in accessing private secondary schools exists even among the richest households in India. Among the richest households, the probability of sending boys to private schools is 24.3% points as compared to 18.5% point for girls. Thus, females from the richest households are 5.8% points less likely to enrol in private secondary schools as compared to boys. Similar is the case among households belonging to asset quintile four (Q_4), though the difference in the probability of accessing private schools is relatively less (5.3% points). The findings reveal that with the increasing cost of private schools in India, a household's ability to pay plays a significant role in the parental choice for secondary schools, particularly in urban areas.

The intra-regional variation (rural-urban gap) in the probability of attending private school is 18% points among the richest households and seven percentage points for the poorest households. More clearly, though both rich and poor households in urban areas have higher chances to enrol their children in private secondary schools than in rural areas, the effect is relatively stronger among rich households. This reflects the difference in the affordability between rich and poor households in sending their children to private schools. However, given the heterogeneity in the private school market in recent years, it is important to examine the type of private schools accessed by the poor and rich households in urban areas. To what kind of private schools the poor households in urban areas are sending their children? Are these private schools too different from the kind of schools accessed by the children of rich households? These are some of the important questions that need further academic engagement and research. Looking at the schools as a binary construct (government and private) may not completely reveal the school choice dynamics in India though it helps in providing a broader context to the issue.

5.4 Other Important Covariates

The other important factor affecting the likelihood of attending private secondary school is education of the household head or, in this case, the highest education of the adults (more than 21 years old) in the household. The probit results show that households with the highest adult education level of graduation and above are 12% points more likely to send their children to private schools than households whose highest adult education is below primary. Higher educated parents may be concerned about the quality of education, and, consequently enrol their children in fee-charging private schools, on the understanding that private schools provide better quality education (Tilak and Sudarshan 2001; Muralidharan and Kremer 2008). Quite interestingly, educated parents and households do not have much gender bias in sending their children to private schools. This may be due to the increase in the awareness level of the household that minimises the discrimination in the choice of schools between boys and girls. Further, this matters more for urban households as compared to rural households. The descriptive results show that in 2011–12, around 51% of the children attended private schools from households having highest adult education level of graduation and above while it was 20% for the households whose highest adult education level was below primary.

Closely related to other household characteristics, social group (caste and religion) is also associated with the demand for private secondary schools in India. As private education is regarded as a symbol of social prestige, one can expect that higher the caste hierarchy, the higher would be the probability of demand for private schools and vice versa (Tilak and Sudarshan 2001). In a recent study, Bhattacharya et al. (2015) find that general caste students are more likely to attend private schools in India. Several other studies have also found that forward castes' households in India are far more likely to send their children to private schools as compared to Scheduled

Caste and Scheduled Tribe households (Desai et al. 2009; Woodhead et al. 2013; Singh 2015). The probit results show that students belonging to low socio-economic settings such as Scheduled Castes, Scheduled Tribes and Muslims are less likely to attend private schools than the upper caste Hindu students. However, students of other minority religions have fair chances to attend private schools as compared to upper caste Hindus. The effect of the social groups on the choice of secondary private schools is higher in urban areas than in rural region. In 2011–12, close to half of the students from OMR groups (40% among upper caste Hindus) were attending private schools, while this figure was only about 19% among STs (Table 5).

6 Conclusions

Using two rounds of IHDS data (2005 and 2012), this study analyses the pattern and determinants of parental choice for secondary schools in India. In particular, potential factors determining parental decision on school choice are examined by region (rural/urban), gender and economic status of the households. The probit results find that female students are 3.8% points less likely to be enrolled in private secondary schools than boys; and this difference is more in rural areas and among poor households. This finding suggests that households prefer to send their sons (than daughters) to private secondary schools that are more expensive and which they perceive to be better in quality. The analysis suggests a striking difference in the choice for private schools among the rural and urban households—urban households are 10.7% points more likely to attend private schools than rural households. We also find that the choice for secondary schools is strongly determined by the paying capacity of the households—students from richest families (quintile 5) have 21% points higher probability in access to private secondary schools than the students belonging to the poorest households (quintile 1), and this gap is higher in urban areas than rural areas. Further, the analysis suggests that probability of attending private schools increases with the rise in the highest level of education of adults of the household. The households, having the highest adult education level of graduation and above, are 12% points more likely to send their children to private schools than the households whose highest adult education level is below primary. This study, thus, shows quite conclusively that the expansion of private schools in India has made significant changes in the parental aspirations and choice for schools.

Secondary education is considered as a gateway to accessing higher education and preparing youths to join the labour market. Considering the importance of secondary education on socio-economic development, the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) scheme (a flagship programme for the development of secondary education) was launched and implemented across India in 2009–10 to enhance access as well as improve the quality of secondary education. It was envis-

aged to provide quality secondary education to all by 2020. Though there is fair progress in enrolment rates in secondary education, with the initiation of RMSA, it is important to examine as to who all are accessing what kind of schools and this study has made an attempt in this direction. However, the scope of this study is limited as it has examined the issue at all-India level while also not getting into many other important debates in the area of school choice. For instance, it is important to understand the expansion of private schools at the sub-national level—in the State, district and even in Talukas. Similarly, given the heterogeneity in the expansion of private schools in India, it is quite useful to examine parental choice for different types of private schools at secondary level. For a more nuanced understanding of the issue, attempt should also be made to discuss the dynamics of shifting of children from government to private secondary schools as it is happening very rapidly, even in the rural areas.

Appendix

See Tables 2, 3, 4, 5, 6 and 7.

Table 2 Distribution of enrolment by types of secondary schools and gender in rural and urban India

	2004–05				2011–12			
	Government	Govt. aided	Private	Total	Government	Govt. aided	Private	Total
Rural								
Male	67.64	12.37	19.99	100	63.98	10.30	25.73	100
Female	68.28	13.13	18.58	100	67.62	10.28	22.10	100
All	67.90	12.69	19.41	100	65.68	10.29	24.03	100
Urban								
Male	45.64	11.23	43.14	100	43.60	9.92	46.47	100
Female	44.96	13.35	41.69	100	47.04	9.26	43.70	100
All	45.30	12.28	42.42	100	45.23	9.61	45.16	100
Total $(R + U)$								
Male	60.84	12.02	27.14	100	56.94	10.17	32.89	100
Female	59.36	13.22	27.43	100	60.42	9.92	29.66	100
Total	60.18	12.55	27.27	100	58.57	10.05	31.37	100

Source Author's calculation from the unit-level record of IHDS I and II

Table 3 Distribution of enrolment by types of secondary schools and educational attainment of the head of the household

	2004–05				2011–12			
	Government	Govt. aided	Private	Total	Government	Govt. aided	Private	Total
Below primary	71.06	11.52	17.42	100	71.15	9.26	19.59	100
Up to upper primary	65.98	13.69	20.33	100	64.99	10.07	24.94	100
Secondary	56.97	11.21	31.83	100	57.66	10.63	31.71	100
Higher secondary	52.07	15.4	32.53	100	51.36	9.9	38.74	100
Graduate and above	48.27	10.74	40.99	100	38.5	10.4	51.09	100

Source Author's calculation from the unit-level record of IHDS I and II

Table 4 Distribution of enrolment by types of secondary schools and asset quintile of the household

Asset quintile	2004–05				2011–12			
	Government	Govt. aided	Private	Total	Government	Govt. aided	Private	Total
1	72.30	11.67	16.03	100	71.08	9.35	19.57	100
2	74.52	10.81	14.67	100	70.72	8.90	20.38	100
3	73.08	9.60	17.32	100	66.67	10.00	23.34	100
4	59.86	15.02	25.12	100	54.72	11.07	34.21	100
5	41.68	13.18	45.14	100	33.87	10.66	55.46	100

Source Author's calculation from the unit-level record of IHDS I and IHDS II

Table 5 Distribution of enrolment by types of secondary schools and social group

Social groups	2004–05				2011–12			
	Government	Govt. aided	Private	Total	Government	Govt. aided	Private	Total
Hindu Upper Castes	52.89	12.06	35.05	100	50.39	10.11	39.50	100
Other Backward Classes	60.12	13.54	26.34	100	56.05	10.29	33.66	100
Scheduled Castes	73.17	10.54	16.29	100	68.05	10.00	21.94	100
Scheduled Tribes	72.33	9.41	18.26	100	71.63	9.75	18.62	100
Muslim	57.57	11.18	31.25	100	63.42	6.93	29.65	100
Other Minority Religions	33.94	25.36	40.70	100	29.37	23.87	46.76	100

Source Author's calculation from the unit-level record of IHDS I and II
Note HUC = Hindu Upper Caste; OMR = Other minority religions—includes Christian, Sikh, Jain and others

Table 6 Notation of the variables used in the probit model

Notation	Name of variable	Definition
School_Choice	School choice	1, if an Individual has participated in private secondary school; 0, otherwise (dependent variable)
Gender	Male	0, if an individual is male
	Female	1, if an individual is female
Location	Urban	1, if an individual resides in an urban area
	Rural	0, if an individual resides in a rural area
Social group		
UC_Hindus[a]	UC Hindus	1, if an individual is upper caste Hindu, 0, otherwise
OBC	OBC	1, if an individual is OBC Hindu; 0, otherwise
SC	SC	1, if an individual is SC; 0, otherwise
ST	ST	1, if an individual is ST; 0, otherwise
Muslim	Muslim	1, if an individual is Muslim; 0, otherwise
OMR	OMR	1, if an individual is Christian/Sikh/Jain. etc.; 0, otherwise
Highest adult (>21 age) education of the HH		
HAE_BP[a]	Illiterate or below primary	1, if the HAE is illiterate or below primary; 0, otherwise
HAE_UP	Primary or UP	1, if the HAE is primary or upper primary; 0, otherwise
HAE_SEC	Secondary	1, if the HAE is secondary; 0, otherwise
HAE_HSE	Higher Secondary	4, if the HAE is higher secondary; 0, otherwise
HAE_Graduate	Graduate	4, if the HAE is graduation and above; 0, otherwise
HH assets index		
Assets_Q_1^a	1st quintile (poorest)	1, if the student belongs to HH asset quintile 1; 0, otherwise
Assets_Q_2	2nd Quintile	1, if the student belongs to HH asset quintile 2; 0, otherwise
Assets_Q_3	3rd Quintile	1, if the student belongs to HH asset quintile 3; 0, otherwise
Assets_Q_4	4th Quintile	1, if the student belongs to HH asset quintile 4; 0, otherwise
Assets_Q_5	5th Quintile (richest)	1, if the student belongs to HH asset quintile 5; 0, otherwise
Grade_level	Grade enrolled	The current grade of the student
HH head occupation		

(continued)

Table 6 (continued)

Notation	Name of variable	Definition
Salaried_employees[a]	–	1, salaried, regular and businessman; 0, otherwise
Agri_allied	–	1, Agriculture and Allied, rural labour; 0, otherwise
Wage_labour_others	–	3, Others; 0, otherwise
NCHILDM	–	Number of male child in the family (0–14 years old)
NCHILDF	–	Number of female child in the family (0–14 years old)

UC = Upper Caste; OBC = Other Backward Caste; SC = Schedule Caste; ST = Schedule Tribe
[a] used as reference category in the probit model

Table 7 Summary statistics of the variables used in the probit estimation

Variable	Observations	Mean	Stand. dev.	Minimum	Maximum
Sec School_choice (Dep. Var.)	13,028	0.3159	0.4649	0	1
Gender	13,363	1.4599	0.4984	1	2
Location	13,363	0.3694	0.4827	0	1
UC_Hindus	13,345	0.2374	0.4255	0	1
OBC	13,345	0.3422	0.4745	0	1
SC	13,345	0.2126	0.4092	0	1
ST	13,345	0.0698	0.2548	0	1
Muslim	13,345	0.1092	0.3119	0	1
OMR	13,345	0.0289	0.1674	0	1
HAE_BP	13,363	0.1635	0.3698	0	1
HAE_UP	13,363	0.3329	0.4713	0	1
HAE_SEC	13,363	0.1837	0.3873	0	1
HAE_HSE	13,363	0.1610	0.3675	0	1
HAE_Graduate	13,363	0.1589	0.3656	0	1
Assets_Q_1	13,358	0.0969	0.2958	0	1
Assets_Q_2	13,358	0.1956	0.3967	0	1
Assets_Q_3	13,358	0.2143	0.4103	0	1
Assets_Q_4	13,358	0.2443	0.4297	0	1
Assets_Q_5	13,358	0.2489	0.4324	0	1
Grade_level	13,363	10.3692	1.1178	9	12
Salaried_employees	13,362	0.2526	0.4345	0	1
Agri_allied	13,362	0.3531	0.4779	0	1
Wage_labour_others	13,362	0.3943	0.4887	0	1
NCHILDM	13,363	0.7252	0.8768	0	7
NCHILDF	13,363	0.6496	0.9190	0	9

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