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# Public or private? Determinants of parents' preschool choice in India

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## Abstract

Nowadays children aged between 3 and 6 years are mostly attending one of the two major forms of preschool viz. public and private preschools in India. Even though public preschools are free of any financial cost to the parents, their preference is more towards private preschools. Based on a primary sample of 1369 children from 1369 households, this study explores the determinants of parents' preschool choices between public and private. Acknowledging the possible sample selection bias in dealing with households of only those kids who have attended a preschool, we deploy Heckman sample selection model as our main regression design. Our results show the choice of a type of preschool heavily depends on parent's socioeconomic status. Economically better off and educationally more aspirant parents prefer private preschool over public preschool in spite of the fact that the former does not provide any other facilities other than education.

**Keywords:** Preschool, Public, Private, Socioeconomic status, West Bengal

**JEL Classification:** I29, I21

## Introduction

Universal early childhood education (ECE) in India is a relatively recent phenomenon which started during the 1990s (Pattnaik 1996). In the past, children were mostly being cared for within the extended family, not only by parents but also by other members of the family. With industrialization, urbanization and drastic changes within the family structure, the demand for preschools and child care centres are growing rapidly. Nowadays, preschool in India would mainly refer to two components: (i) early education and school readiness, and (ii) child care. Therefore, the choice of types of preschool depends on what parents are looking for and what is available. There is a strong sense among parents that preschool education can help children to overcome initial difficulties they face in coping with formal learning environments during the early school years (Rana et al. 2008; Pattnaik 1996). As found out by Rana et al. (2008), many parents believe that the preschool activities, singing, dancing, recognizing colours, etc., would help their children following the lessons to be given in the primary schools in the imminent future. Alternatively, parents may also send their children to preschool for logistic reasons such as free meals and other benefits, as well as considering it as a child care centre that enabling

parents to engage themselves in economic activities (Centre for Early Childhood Education and Development 2015). However, contrary to the conventional belief that the poor families only send their children to preschools for food and material benefit, studies also found that majority of the low-income parents also send their children to preschool centres (especially the public ones) to prepare them for primary classes and only minimal number of parents send their children for food, etc. (Centre for Early Childhood Education and Development 2015). It is also witnessed that given the income variation among different groups, there is an increasing demand for preschools, especially in areas where parents are relatively more educated (Citizen's Initiative for the Rights of Children under Six 2006).

In India, the delivery of early childhood education and care is provided through two main channels: public and private. In operation since 1975, Integrated Child Development Scheme (ICDS) is one of the largest publicly sponsored child development programme in the world that offers non-formal preschool education to children aged three to six, along with other nutritional benefits such as daily free meal and growth monitoring. Popularly known as 'Anganwadi' (meaning village courtyard), the lowest tier of the ICDS programme, is the main platform where all the services converge. As estimated, there are about 36 million children (3 to 6 years of age) enrolled for preschool education (Ministry of Women & Child Development 2015). Though the performance of ICDS with regard to malnutrition and undernutrition among children is well applauded (National Institute of Public Cooperation and Child Development 1992, 2006); but that with regard to ECE is dubious and much criticized for the quality and methods (Pratichi 2009; Citizen's Initiative for the Rights of Children Under Six 2006; UNESCO 2006; Prochner 2002; Sharma 1987, 1998).

Alternatively, there exist private providers of early education which arguably refers to a profit-making initiative. In the absence of any regulation and control by the Government, the curriculum and education offered by them are of a wider range. Though the exact number is not available, evidence suggests that enrollment in private preschools are rapidly increasing (Singh and Mukherjee 2017). A recent study tracking 13,000 children in several states in India found that about 43% of the children attended private preschools (Centre for Early Childhood Education and Development 2015). Most of the experts oppose the unregulated growth of the private preschool sector in India, and often these preschools are criticized for their curriculum and methods (Kaul and Sankar 2009; Swaminathan 1998; Kaul 1992, 1998). As pointed out by Prochner (2002), preschool in India is a serious business and preschools are often considered the entry point to reputed primary schools which are highly demanded by parents. This creates overheated competition for places in these schools and the need for school readiness which preschools are expected to deliver (Prochner 2002, 446).

Although Anganwadis are hugely accessed across the country, private preschools are also getting very popular among parents and expanding to the rural and tribal areas, and across many states (Kaul et al. 2015). There exists a great degree of heterogeneity in the type of preschool attended across regions. However, this could also be due to differential availability of private provisions in these regions and may not necessarily always reflect parental choices (Centre for Early Childhood Education and Development 2015, 14–15). It is also observed that middle and low-income families are also choosing private

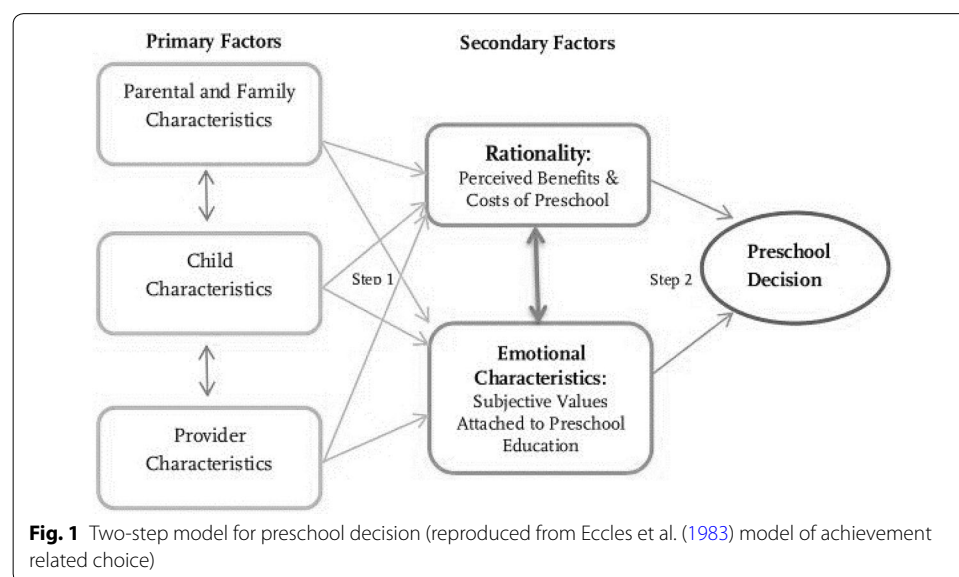
preschool which is sometimes beyond their financial ability. Most of the parents prefer education-centred curriculum of private preschools which they thought might better help children to get acquainted with the formal schooling at later years (Rana et al. 2008, 9).

Given the Indian context, it is utterly important to investigate the determinants of preschool choices. This will substantially contribute to the policy debate in this arena. It will further help to improve the available preschool provisions to better meet the demand. Therefore, the objective of the study is to identify the factors that could explain the heterogeneous preschool decision viz. choice of public or private preschool by the parents for their kids. Using an empirical method, this study investigates the determinants of preschool choice using primary survey data from West Bengal, India.

### Determinants of preschool choice: a conceptual framework and state of work

The preference for a preschool heavily depends on the reason why parents send their kids in the preschool. Studies show that parents want education for their children because they want their children to have a better future in all respects and providing early education could be one of the initial steps that parent could take (Checchi 2006, 15).

The plausible factors and the mechanism behind preschool choice can be well explained using the two-step model for preschool decision presented in Fig. 1, which was reproduced from the *Model of Achievement Related Choice* developed by Eccles et al. (1983). The main assumption of which was that the primary factors affect the preschool decisions indirectly through the secondary factors. According to the model, the variation in preschool decisions comes in two ways: At the first stage, several primary factors (both internal and external) such as parent and child characteristics, provider characteristics, etc., influence parent's rationality to think and the subjective values towards early education (referred as secondary factors). At the second stage, these perceived



cost–benefit and parent’s values shape their preschool decision. The empirical analysis of this study provides the opportunity to observe the potency of this two-step model and to identify the key factors responsible in the context of preschool choices in India.

As observed from the model above, educational choices are the reflection of parents’ rationality to think, their resource endowment, societal status, and also their values and sentiments (Meyers et al. 2009; Gibson and Weisner 2002). Endowments of different resources, both economic and non-economic, have a direct impact on educational choices. Evidence suggests that children from lower social strata meet very severe selection barriers at the early educational transition because of the differences in resource endowment and the values attached to education by different social groups (Blossfeld and Shavit 1993).

Jonsson and Erikson (2000, 347) demonstrated that resourceful families can send their children to expensive private school and transmit relevant knowledge and skills to their children. Also, the probability of having ever attended a preschool depends significantly on household income. Children of families with a lower household income were found attending early education programmes for a shorter period of time than children from high-income families (Spiess et al. 2008; Schober and Spiess 2013). Other than this, several factors related to parents’ employment such as type of work and its duration, whether single or both the parents work may also affect the preschool decisions (Vesely 2013; Han 2004; Jonsson and Erikson 2000; Spiess et al. 2008; Schober and Spiess 2013).

Moreover, parent’s education may have a significant role in their preschool decision-making; and studies have already confirmed that parental education is a good indicator of cultural and educational resources in the family. Well-educated parents may possess better strategic knowledge about different educational options available in the market and also help children with the learning of cognitive and other skills that improve their performance and probability of success. Parents with higher education make sure that their children are exposed to numerous educational opportunities in their communities. There are several plausible ways by which more educated parents reinforce the academic ability of their offspring such as choosing the right option for children and at the right time (Jonsson and Erikson 2000, 356).

Parent’s beliefs and values may also carry considerable weight in the decision-making process. There is also a direct effect of social positioning on parents’ motivations and aspirations for their children’s education. For example, parents’ social position sets a standard or ‘family status’ (Breen and Goldthorpe 1997) and parents want their children to reach at least that level. As proposed by Johansen et al. (1996, 759), ‘parents who value developmental characteristics of care choose centre care, parents for whom hours, location, and costs of care are most important chose care at home.’ According to Liang et al. (2000, 379), parents, irrespective of ethnic origin, who hold explicit beliefs and practices related to early literacy development are more likely to select centre care.

Furthermore, ethnic background and tradition, cultural beliefs and practices are often referred as important determinants of ECE decisions (Johansen et al. 1996; Leseman 2002; Liang et al. 2000; Singer et al. 1998). Besides; given the social structure and cultural background in India, influence of influence of ‘significant others’ cannot be overlooked (Sewell et al. 1969, 1970).

Besides, several external factors such as the existing legal framework for child care, the availability of preschool provisions can also play crucial role in the preschool decision. For example, the Right to Education Act (RTE) in India was introduced in 2009 that guaranteed access to free primary education for all children in the age group 6–14 years. Evidence shows that there was increase in school enrollment after RTE was introduced (Shah and Steinberg 2019). However, there exists no such policy in early childhood education which can accelerate preschool attendance.

Moreover, the differential preschool decision can also be attributed to the availability of such services and the quality of it. A recent study from India shows that the distance of the preschool from the residence of children was negatively associated with their preschool attendance and higher the distance lower the probability of attending preschool (Ghosh 2019b). The quality of services provided in the schools may also affect their decision as low-quality services such as lower number of teachers, limited availability of teaching materials, etc., may make a preschool provision less attractive (Jacoby 1994). The provision of lunch at a day care facility can also be very important for parents to choose a preschool (Spiess et al. 2008, 17). Parents often assess the quality of preschools in terms of health, safety, and caregiver characteristics (Van Horn et al. 2001; Cryer and Burchinal 1997).

## Methodology

### Data and variable description

The data used for this paper has been collected from a field survey conducted in two districts of West Bengal, India, in 2015. The sampling instrument used for this research was based on purposive sampling and multi-stage sampling procedure. The choice of this sampling method was driven by the practical reasons such as convenience in terms of finding the sample more accurately, and efficiency in terms of cost and time. The state West Bengal was chosen for the study for pragmatic reasons such as the language spoken in the region, the availability of administrative support from the state and regional governments, and resource required to conduct the field work, etc. All districts in West Bengal were ranked according to the per-capita income and adult literacy rate, and then two districts were randomly selected, one from the top four and another from the bottom four of the list. The two of the districts in West Bengal, named: Howrah and Murshidabad were chosen for the study to have high degree of diversity. Murshidabad in the north-central part of the state bordering Bangladesh and Howrah in the south-central part of the state. Murshidabad district occupies 6% of the total area of West Bengal and comprises 7.78% of the total population of West Bengal. Howrah district, on the other hand, occupies about 1.6% of the total area with the population share of 5.26% of the state. The aggregate population of these two districts represents about 13% of the total population of the state. The percentage of children in 0–6 age group in total population was relatively higher in Murshidabad (13.79%) compared to Howrah (10.27%), indicating a greater requirement of child care services in that district. In Howrah district, more than half of the populations lived in urban areas, whereas the same in Murshidabad district is only about 12%.

In terms of literacy rate, Howrah district had an adult literacy rate of 83.85% and the same for Murshidabad district was 67.53%. The Scheduled Caste (S.C.) and

Scheduled Tribe (S.T) population in both these districts are well below the state average. In terms of religious origin, population in Howrah comprises 72.90% Hindus and 33.21% Muslims as two major religious groups, while the same in Murshidabad is 26.20% and 66.27%, respectively (source: the Census of India 2011).

The unit of analysis for the study is the household having at least one child in 6–7 years age group, currently studying in the first grade in primary schools. The household survey was conducted by personal visit to each household and filling in a paper based questionnaire. Among the respondents, 11% were fathers, 84% were mothers and rest 5% were grandparents or other relatives with whom the child lives. The household survey questionnaire consists of three different blocks: (1) child Information, (2) household information, and (3) information on preschool attendance.

For ethical consideration, participation in the study was absolutely voluntary and individual identity of the participants was kept anonymous. Information provided by the participants' was treated confidentially and only used for the academic purposes. The final sample covers over 200 rural and urban settlements in two districts named Howrah and Murshidabad, covering a total of 1369 households. Out of these 1369 households, 904 (66%) households reported that they had sent their children to preschool, of which 645 (71%) attended Anganwadi Centres (public preschool) and 259 (29%) attended private preschools.

### Identification strategy

Out of 1369 households, 904 households reported that they had sent their children to the preschool. Now dealing only with these 904 households to see the determinants of parents' choice of preschool type means we will be dealing with a selected sample from 1369 households. Families may decide not to send their children to any preschool if they find that the available alternatives are not suitable for them and typically this type of intrinsic preference is unobserved. The estimation based on the selected 904 households may typically generate *Sample Selection Bias*. For example, families may decide not to send their children to any preschool if they find that the available alternatives are not suitable for them. Typically this type of incidence goes unobserved if only the households where children attended preschool are selected. Hence using logistic regression estimation considering only those households which decided to send their children to a preschool can lead to a biased estimation. In this case, standard approach is to adopt the Heckman Correction or Heckman sample selection model (Heckman 1979), which is a two-stage method. First, looking at the association between the household characteristics and preschool attendance. Second, given that parents have sent their children in preschool, we investigate whether the socioeconomic status of households has any influence on the type of preschool chosen by the parents. Therefore, this study follows a two-stage Heckman method with sample selection correction (Van De Ven and Praag 1981). This involves two steps, estimating selection equation and then outcome equation. The strategy is to estimate the selection equation first and then estimating the outcome equation separately for each of the objectives stated above.



**Selection equation: preschool attended**

This is a probit regression (binary dependent variable taking a value of '1' if the parents from the household send their child to any preschool and '0' otherwise) to explain the demand for ECE. In terms of econometric model, the selection equation or the probit model (refer to [Appendix](#)) to estimate the probability of households to demand for ECE can be explained in terms of the following relationship:

$$y_i^{\text{preschool\_attended}} = z_i\gamma + u_{1i}. \quad (1)$$

**Outcome equation: type of preschool chosen**

Since the objective here is to see the determinants of parents' choice of preschool type (public or private) given that they have already sent their children to the preschool, the outcome equation here is a probit regression. The outcome equation can be explained in terms of the following relationship:

$$y_i^{\text{preschool\_type}} = x_i\beta + u_{2i}, \quad (2)$$

where  $u_1 \sim N(0, 1)$  and  $u_2 \sim N(0, 1)$  and  $\text{corr}(u_1 u_2) = \rho$ .

We observe the binary outcome  $y_i^{\text{preschool\_type}}$  if  $y_i^{\text{preschool\_attended}} = 1$  or  $z_i\gamma + u_{2i} > 0$  (Wooldridge 2006, 618–620). In the outcome equation,  $x_i$  is the vector of the independent variable 'Socioeconomic Status' of household  $i$  affecting the probability of choosing a type of preschool,  $\beta$  is the vector of coefficients of independent variables and  $u_{2i}$  is the error terms. In the selection equation,  $z_i$  is the vector of independent variables affecting the probability of sending children to preschool of the  $i$ th household,  $\gamma$  is the vector of coefficients of independent variables and  $u_{1i}$  are the error terms.  $N(0, 1)$  represents the standard normal distribution of the error terms. When  $\rho \neq 0$ , standard probit estimations using only the outcome equation, taking only the households who have sent their children to preschool, would yield biased and inconsistent estimates. Hence, probit regression with sample selection is applied, following the two steps Heckit method. In the first stage, we estimate a probit model of  $y_i^{\text{preschool\_attended}}$  on  $z_i$  and obtain the estimate  $\hat{\gamma}$ . Then compute the inverse Mills ratio ( $\text{imr}$ )  $\hat{\alpha}i = \alpha(z_i\hat{\gamma}) = \varphi(z_i\hat{\gamma})/\Phi(z_i\hat{\gamma})$  (it is the ratio between the standard normal pdf and the standard normal cdf).

In the second step using the selected sample, i.e. households for which  $y_i^{\text{preschool\_attended}} = 1$ ,  $y_i^{\text{preschool\_type}}$  is regressed on  $x_i, \hat{\alpha}i$ . This procedure will give an estimator  $\hat{\beta}$ , which is consistent and approximately normally distributed. The usual  $t$  test was followed, to test the selection bias, on the coefficient on 'imr', i.e. coefficient on  $\hat{\alpha}$  as a test of  $H_0 = \rho = 0$ . In the result section both the results with and without sample selection correction are reported, where results without sample selection correction are the estimates without incorporating 'imr' as one of the covariates.

One of the important assumptions of this two-step sample selection model is that  $x$  is a strict subset of  $z$ . This implies that all regressors used in the second step need to be included as explanatory variables in the first step, and we should have at least one variable in  $z$  that is excluded from the second stage regression (Wooldridge 2006, 618–620). Otherwise, the model is identified by the functional form and the

coefficients have no structural interpretations (Cameron and Trivedi 2009). The exclusion restriction demands at least one such variable, which influences household's (synonymous to parents') decisions of sending or not sending children to preschool, but would not influence the choice of a type of preschool. In this study, we used the "distance of preschool from residence" as the exclusion variable. The argument behind this is that, the distance of the preschool from the residence of the children is exogenous and whether a child will attend preschool or not depend very much on whether there is any preschool in their neighborhood (see [Appendix](#)). Whereas, if parents chose a particular preschool (may also be far off) then they are already well aware of the distance and hence it does not seem to have any further impact on preschool choice. This proposition was also empirically tested in the context of this study and no significant association noticed between the distance of the preschool and the type of preschool chosen (refer to [Appendix](#)).

As already explicated in the theoretical discussion, the set of factors that could have an influence on the choice of a type of preschool can be of a diverse range. Also, as suggested in the two-step model of educational decision, the primary factors are mainly accountable for bringing the variation in preschool choice via the secondary factors. Therefore, this study also aims to investigate the effectiveness of the Eccles et al. model in this context by assigning the model components to the main explanatory variables in the empirical analysis. It could also be helpful in identifying whether any of the three types of primary factors described in the model have a stronger effect than others.

Therefore, a number of parental and family characteristics were included in the econometric analysis. The economic condition of the family is indicated by monthly household income measured in Indian rupee and by the type of housing that the family had. The type of housing was divided into three categories: 'Concrete', 'Semi-concrete', and 'Non-concrete', based on the material used to build the house as defined by the Census of India (2011). Furthermore, the educational and occupational status of parents was also included. The highest education level achieved by parents was divided into three categories viz. 'up to primary', 'above primary and up to secondary' 'higher secondary'. Parents' occupational status was defined as 'regular' if the person was self-employed and/or had worked at least 3 months in the last 6 months. Besides, the person was 'casual or not' employed if the person had no work or worked for less than 3 months in the last 6 months. The ethnic origin of the family such as religion and caste were used to capture the cultural variation in households. Families were categorized based on religious origin as 'Hindu', and 'Islam and other' religion. Furthermore, families were also categorized into different castes such as 'Scheduled Caste' (S.C.), 'Scheduled Tribes' (S.T.), and 'Other Backward Castes' (OBC), as defined under Article 366 (24) and (25) of the Indian Constitution, respectively. Besides, a set of variables were introduced in the analysis in the form of demographic characteristics of the households.

Furthermore, variables representing child characteristics such as sex of the child, age of the child, general health status of the child were also included in the analysis. Since there was no information available on provider characteristics, district-wise and rural–urban wise location fixed effects were included. In the absence of



supply-side information, these were helpful in assessing the regional variation in preschool provisions. Finally, the reason for choosing a preschool was introduced as a categorical variable denoting whether the choice of preschool was due to 'educational' or 'non-educational' reasons (refer to [Appendix](#)).

## Results and discussion

### Exploratory results

The descriptive statistics show a considerable variation in the type of preschool attended based on different parameters of the socioeconomic status of households. For example, Tables 1 and 2 show significant variation in the economic status of households based on the type of preschool chosen. Parents sending their children to a private preschool had relatively higher income and better housing.

Similar pictures can be depicted with respect to social and cultural status of the household as shown in Table 2. There exists considerable variation in social and cultural status

**Table 1 Economic status and type of preschool attended**

Variable name	Definition	Values	Public preschool		Private preschool		t-statistics
			Mean	Std. dev.	Mean	Std. dev.	
Monthly household income	Gross monthly income of the household	In Indian rupee	5373.48	2652.84	10,321.62	6522.06	$t(293) = -11.82^{***}$

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

**Table 2 Social status and type of preschool attended**

Variable name	Definition	Values	Public preschool Number of households (row percentage in parenthesis)	Private preschool Number of households (percentage in parenthesis)	Pearson $\chi^2$
House type	Type of housing household have	1 = concrete	227 (53.92)	193 (46.08)	$\chi^2(2) = 127.15^{***}$
		2 = semi-concrete	215 (80)	54 (20)	
		3 = non-concrete	203 (94.42)	12 (5.58)	
Parent edu	Highest education level achieved by either of the parents	1 = up to primary	226 (93.80)	15 (6.20)	$\chi^2(2) = 105.52^{***}$
		2 = up to secondary	309 (69.28)	137 (30.72)	
		3 = higher secondary or above	110 (50.46)	107 (49.54)	
Father job	Occupational status of the father	1 = regular	460 (70.95)	192 (29.51)	$\chi^2(1) = 0.49$
		2 = casual or no job	178 (71.16)	66 (27.84)	
Mother Job	Occupational status of the mother	1 = regular	26 (53.06)	23 (46.94)	$\chi^2(1) = 8.56^{**}$
		2 = casual or no job	619 (72.43)	235 (27.57)	
Religion	Religious origin of the household	1 = Hindu	464 (67.94)	218 (32.06)	$\chi^2(1) = 14.92^{***}$
		2 = Islam and others	181 (81.61)	41 (18.39)	
Caste	Caste origin of the household	1 = Backward castes (S.C, S.T. & OBC together)	177 (80.45)	43 (19.55)	$\chi^2(1) = 11.79^{***}$
		2 = General caste	468 (68.37)	216 (31.63)	

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

among households with respect to the type of preschool chosen. At the next level, an attempt has been made to examine the association between household characteristics and type of preschool chosen to identify factors which have influence on preschool choices.

### Confirmatory results

Determinants of parents' choice of the type of preschool were estimated using the Two-Stage Heckman Model. Table 3 represents the outcome equation which estimates the determinants of parents' choice of preschool type.

The coefficient of the inverse Mill's ratio (IMR) in the table above is statistically insignificant which implies that there was presumably no selection bias in estimating the model even with the selected sample. The economic condition of the household, measured in terms of monthly household income and type of housing, has a significantly positive relation with the choice of a private preschool. Families with higher income and better housing were more likely to choose private preschool. In fact looking at the coefficient of

**Table 3 Determinants of preschool choice of the parents: marginal effects of Probit regression**

Probit estimation (base outcome: public preschool)	Coefficient
Log (household income)	0.335*** (0.030)
House type (ref: non-concrete)	
Concrete	0.189*** (0.041)
Semi-concrete	0.117** (0.036)
Parents' level of education (ref: up to primary)	
Secondary	0.164*** (0.035)
HS and above	0.194*** (0.059)
Fathers' occupation status (ref: regular job)	
Casual or no job	− 0.071* (0.036)
Mothers' occupation status (ref: regular job)	
Casual or no job	0.015 (0.057)
Religious origin (ref: Hindu)	
Islam and others	− 0.019 (0.064)
Caste origin—backward caste (ref: general caste)	
Backward castes (S.C., S.T., OBC)	0.061* (0.031)
Sex of the child (ref: male child)	
Female child	0.066** (0.025)
General health status of the child (ref: below average)	
Average or good	− 0.025 (0.070)
Number of children	− 0.041* (0.020)
Residing location (ref: rural)	
Urban	− 0.018 (0.029)
Residing district (ref: Howrah)	
Murshidabad	0.166* (0.074)
Reasons for choosing preschool (ref: non-educational)	
Educational	0.174*** (0.045)
IMR	0.174 (0.157)
Observation	895

Coefficients represent marginal effects

Standard error in parenthesis. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

household income, with 1% increase in households' annual income, probability of sending kids to a private preschool increases by 33% points. Besides, parents with higher educational level (secondary or above) were, in general, significantly more likely to choose private preschools compared to parents only with primary or no education. Father with casual employment was less likely to send his child to a private preschool.

In terms of other family characteristics, girls, in general, have a higher probability of attending private preschool compared to boys. Similarly, children from Murshidabad district were found to be more likely to attend private preschool compared to children from Howrah district. Besides, the total number of children in the household was negatively associated with attending a private preschool. Another important finding is that parents who had chosen a preschool for educational reasons (i.e. early education and school readiness) were, in general, significantly more likely to send their children to private preschool compared to parents who had chosen preschool for non-educational reasons (i.e. free meal and cost, etc.). Therefore parents with higher educational aspiration seem more likely to send their children in private preschool.

Furthermore, one can assert that, among the primary factors as explicated in the two-step model, parents and family characteristics play a more decisive role in preschool choice in the context of this study. However, considering the lack of information on provider characteristics, it cannot be said with certainty whether parental aspects are the only major factors responsible for the variation in preschool choice.

#### **Limitations of the study and further scope**

The study has already illustrated that factors which could influence the parent's decision on sending kids in preschool are partly observed (especially which are generating from their socioeconomic background) and partly unobserved (especially which are generating from their motivation or psychological traits). The study paid enough attention on the observed factors available from the field survey data, but relatively less attention on the unobserved factors due to the standard limitations of any observational study. As we had no panel data which could largely address the time-invariant unobserved heterogeneity through panel fixed effect estimations, we had to rely on our cross-sectional data. However, our Heckman sample selection model partly reduces this bias of estimation which could primarily generate from this unobserved parental heterogeneity due to their heterogeneous motivation or psychological traits. Therefore this aspect can be considered as a little limitation of the study which is inherent with any observational study with cross-sectional data.

Even with a cross-sectional observational data, one could do a qualitative study further to supplement our findings. Possible other research methods could be an exploratory ethnography or focus group discussion, and semi-structured personal interview. Results from this exploratory ethnography can elicit parental motivation or psychological traits.

#### **Conclusion**

Given the fact that about 90% of the parents in the study mentioned early education and school readiness as the reason for them to send their children to preschool (refer to [Appendix](#)), it is quite clear that parents would prefer to choose a preschool where they can be assured that their children are having such benefits. Now having two alternative choices for parents, public (Anganwadi Centres) and private preschools, private

preschools seems to be their first preference, if they can afford. As mentioned already with each percentage increase in households' annual income, probability of sending a child to the private preschool increases considerably. Moreover, educationally more aspirant parents prefer private preschool over public preschool in spite of the fact that the former does not provide any other facilities other than early education. Therefore, it is evident that high income and educated parents have preference towards private school.

However, there exists not enough evidence to claim whether any of the existing preschools in India, viz. Anganwadi (as public preschool) and private preschool provide any additional benefit in child development. A recent study showed that attending private preschool was associated with higher cognitive and subjective well-being (Singh and Mukherjee 2017), whereas, another study found no significant association between the type of preschool attended and children's cognitive and social development (Ghosh 2019a). In fact, the promise of private school providers that children will be rapidly learning and teaching is not always delivered in practice (Streuli et al. 2011). The recent research shows that the quality of education and care available to children in India is not always developmentally appropriate for children (National Council of Educational Research and Training 2015).

Besides, Anganwadi centres play an important role by accommodating children from lower socioeconomic background and providing basic nutritional support along with their growth monitoring. Whereas, with the increase in income and with higher educational aspiration parents seem to prefer private preschool where children are getting educational component only and that too for money. Hence the finding pose a serious question on the rationality of parents' choice of preschool in one hand and big question of quality of school readiness of the public preschool on the other hand.

In the Indian context, there is no concrete evidence yet to claim which of these two types of preschools helps children better in their development process. Most of the educated and economically sound parents prefer private preschool particularly due to their emphasis on early education and school readiness which they find matching to the education centric curriculum of these private preschool, whereas Anganwadi centres were found to have less focus on the early educational component and more on the nutritional component of the ICSD programme. This could be the reason for many parents, who prefer early education and school readiness for their children, not to send their children to these preschools as their socioeconomic situation improve. Therefore, this study raised an important need from the demand side of the parents to bring more educational and school readiness component to public preschools system in India along with its nutrition and health monitoring component. Considering the huge importance of nutritional component and growth monitoring aspects as well as cognitive and socioemotional skills at the developing stage of the child, provision of a more structured and scientific provision of ECE along with nutritional development could substantially reduce child poverty in the country.

#### Abbreviations

ECE: Early Childhood Education; HS: Higher secondary; ICDS: Integrated Child Development Scheme; IMR: Inverse Mill's ratio; OBC: Other Backward Caste; RTE: Right to Education Act; S.C.: Scheduled Caste; S.T.: Scheduled Tribe; UNESCO: United Nations Educational, Scientific and Cultural Organization.

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**Authors' contributions**

The authors are responsible for this research. Both authors have substantially contributed to conceptualizing and designing the study, analysing the data, writing and revising the manuscript. Both authors read and approved the final manuscript.

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**Availability of data**

The data that support the findings of this study was made available by the Bamberg Graduate School of Social Sciences (BAGSS), University of Bamberg, Germany, under the German Excellence Initiatives, and restrictions apply to the availability of these data, and so are not publicly available. The data is however available from the authors, subject to formal approval from BAGSS upon reasonable request.

**Competing interests**

The authors declare no competing interests.

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**Appendix**

See Tables 4, 5 and 6.

**Table 4 Estimation of the selection equation**

Probit model. Base outcome: preschool non-attended	Coefficient
Log (household Income)	0.055 (0.030)
House type (ref: non-concrete)	
Concrete	0.025 (0.033)
Semi-concrete	0.010 (0.028)
Parents' level of education (ref: up to primary)	
Secondary	0.059* (0.028)
HS and above	0.192*** (0.043)
Fathers' occupation status (ref: regular job)	
Casual or no job	− 0.076** (0.026)
Mothers' occupation status (ref: regular Job)	
Casual or no job	0.062 (0.059)
Religious origin (ref: Hindu)	
Islam and others	0.180*** (0.027)
Caste origin-backward caste (Ref: general caste)	
Backward castes (S.C., S.T., OBC)	0.022 (0.027)
Sex of the child (ref. male child)	
Female child	0.027 (0.022)
General health status of the child (ref: below average)	
Average or good	0.179** (0.039)
Number of children	0.000 (0.016)
Residing location (ref: rural)	
Urban	0.002 (0.032)
Residing district (ref: Howrah)	
Murshidabad	− 0.335*** (0.029)
Type of preschool (ref: public preschool)	
Private preschool	0.104*** (0.017)
Distance (ref. more than 500 m)	
Within 500 m	0.051* (0.022)
Observation	1351

Coefficients represent marginal effects

Standard error in parenthesis. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

**Table 5 Estimation of the effect of distance on the choice of a preschool type**

Probit estimation (base outcome: public preschool)	Coefficient
Distance of the nearest preschool (ref. within 500 m)	
More than 500 m	− 0.148 (0.109)
Log (household income)	1.480*** (0.151)
House type (ref: non-concrete)	
Concrete	0.821*** (0.201)
Semi-concrete	0.551*** (0.192)
Parents' level of education (ref: up to primary)	
Secondary	0.853*** (0.177)
HS and above	0.916*** (0.215)
Fathers' occupation status (ref: regular job)	
Casual or no job	− 0.230* (0.139)
Mothers' occupation status (ref: regular job)	
Casual or no job	0.00580 (0.260)
Religious origin (ref. Hindu)	
Islam and others	− 0.302* (0.171)
Caste origin-backward caste (ref: general caste)	
Backward castes (S.C., S.T., OBC)	0.237 (0.145)
Sex of the child (ref. male child)	
Female child	0.296*** (0.111)
General health status of the child (ref: below average)	
Average or good	− 0.311 (0.214)
Number of children	− 0.178** (0.0883)
Residing location (ref: rural)	
Urban	− 0.0637 (0.135)
Residing district (ref: Howrah)	
Murshidabad	1.200*** (0.163)
Constant	− 14.97*** (− 1.415)
Observation	895

Coefficients represent marginal effects. Standard error in parenthesis

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



**Table 6 Reasons for choosing a preschool type**

Type of preschool chosen	Type of reasons	Derived categories	Parent reasons
Public preschool	Educational	Early education (65%)	Education is important for the child's future Child learns something early
		School readiness (20%)	Child will get used to go to school Child gets ready for primary school Child get more socialized
	Non-educational	Material benefits (13%)	Get free meal and accessories No cost for schooling
		Other reasons (2%)	Mother gets time for other siblings Parents get time for housework Parents get time for paid work
Private preschool	Educational	Early education (78%)	Education is important for the child's future Child learns something early
		School readiness (22%)	Child will get used to go to school Child gets ready for primary school Child get more socialized
	Non-educational	Material benefits (0%)	Get free meal and accessories No cost for schooling
		Other reasons (0%)	Mother gets time for other siblings Parents get time for housework Parents get time for paid work

Values in parentheses represent the percentage of total parents responded to a certain category

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