

## **Factors Affecting Choice of School: An Empirical Study on Primary Schooling in Alipurduar District of West Bengal**

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### **Abstract**

*Over the last one decade or so it has been observed that enrolment in private schools in India has increased manifold. Existing literature found that parental perception regarding private schools were one of the important factors for such popularity. But perceptions may not be the reality and that was even admitted by empirical studies. Given this background, the present study intends to identify what kind of family level characteristics have been interplaying dominant role in deciding school choice by the parents.*

**Keywords:** *Enrolment, School choice, Parental perception, Multiple Correspondence Analysis, Human capital index, Material capital index.*

**JEL Classification Code:** *I21, I24*

### **1. Introduction**

During the last decade the growth of private schools across India is remarkable. This might be the result of increasing popularity for the private schools among the parents for enrolling their child into the private schools. Existing literature suggested host of reasons for such kind of behaviour of the parents about school choice. Kingdon (2007) found that parental perception about the quality of private school was better than that of the government schools. Absenteeism was found to be more in teachers of the government schools (Kingdon 2007; Muralidharan and Kremer 2008). General belief is that private schools are much more accountable towards the parents of such schools. Children of private schools have higher achievement scores compared to their counterparts of the government schools (Muralidharan and Kremer 2008; Tooley et al). Whatever may be the reasons for such popularity of private schools, the debate on the quality of learning outcome of the students of government and private schools remains inconclusive one. A study based on the design of Randomized Control Trial (RCT) on 10,000 students of Andhra Pradesh in 2004 found no remarkable improvement of learning outcome of the students of private schools over their counterparts in government schools. Learning outcomes of the students of low-fee charging schools are not conclusively better than that of the students of public schools (Chudgar and Quin 2012; Karopady 2014). Desai et al (2008) found that in many states of rural India, educational performances of the students of private schools were

not consistently higher than the students of government schools. Nambissan's study (2012) revealed that learning outcome of the children of low cost private schools were not better than the government schools. In a study by Kaur (2017) showed that the shift from government to private schools in rural Punjab did not give any evidence of learning improvement. The study by Azim Premji Foundation (2018) in 10 districts of Chattisgarh, Karnataka, Rajasthan and Uttarakhand found that parental perceptions about the quality of schools played an important role for choosing the private schools in spite of the fact that in reality the information about the school characteristics did not match with these perceptions of the parents. Interplay between the cultural aspirations of the parents and marketing efforts of the schools actually undermines the educational outcomes of the private schools (Lahoti and Mukhopadhyay 2019). In the above background, this study intends to examine the causality between the characteristics of the family of the child and the corresponding school choice. Since parents are the main decision makers for the wellbeing of their child, the present study has focussed its attention to the family of the students only. If the parental perceptions about the private schools are hold at a high esteem, merely desire for admitting the child into such private schools should not be the only criterion for admission. This is because of the cost associated with the studying in private schools. The objective of the study is to find out how is the variance in the choice of schools being explained by the family level characteristics.

## 2. Literature Review

Since this study is on the pupils of the primary schools so it is understandable that child of such tender age has obviously no say over the decision of his or her admission into a particular type of schools. Therefore, what factors are playing behind the parental decision on the matter of school choice? Host of reasons spanning from the quality of school facilities to the quality of learning outcomes of the private schools compared to public schools have been surfaced in the current literatures. Apart from these institutional factors, parental perceptions about the school characteristics appear to be a deciding factor for the choice of particular type of school. These parental perceptions have to be studied in a society where asymmetric information is available and many a time people get misconceived. On the issue of schooling facilities, characteristics of private schools like lower pupil-teacher ratio (Goyal and Pandey 2009), more presence of schools in a locality (Tooley and Dixton, 2008 & 2009), closely located to the learners' house (Srivastava 2008; Ohara 2012) influence the parents at the time of their decision about school choice. On the matter of quality education parents are highly moved by the facts that private schools performs better than that of the public schools (Desia et al 2009; Sing 2013, 2015; Muralidharan&Sundararaman, 2013; Kumar 2018, Govinda, Varghese, and Carron 1993).

Since the implementation of Sarva Siksha Abhiyan (2001), it is undeniable that infrastructure facilities of the government schools have improved a lot. On the other hand learning outcomes of the students of private schools did not always show better performance over the public schools (Chudgar and Quin 2012; Desai et al 2008; Karopady 2014; Nambissan 2012; Kaur 2017). In spite of such contradictory evidences, it has been found that parental choice of schools becoming much more skewed towards private schools. The debate over the causes of such school choice has further been revisited by considering other factor like parental perception about the characteristics of private schools (Kingdon 2007; Lahoti and Mukhopadhyay 2019). But parental perception about the characteristics of schools (government or private) is a subjective issue which may not be always a determining factor since our objective is to identify the factors objectively. This study intends to contribute some knowledge to the existing literatures by revisiting on the issue of school choice by the parents.

## 3. Theoretical Model

This research intends to address the parental choice of schools by exploring the family level characteristics only. This is because parents are the prime driver of the demand for particular type of school especially at the beginning of education of children. Merely parental perceptions about the quality of the infrastructural facilities or the quality of education can never be the only factors that determine the decision of school choice of the parents. This because such perceptions of parents about the characteristics of the schools are often misleading and are based on misinformation (Lahoti and Mukhopadhyay 2019). Since there are only two options before the parents either to admit their child in fee-charging private schools or to fee-free government schools, economic conditions (wealth) of the family have to be incorporated as an independent variable. Since household decision making is highly influenced by the education level of the parents, stock of human capital of the household has been taken as another independent variable. This study further includes gender and the caste affiliation of the learners, two other factors about which less is known in the parental choice of schools in India. Having conceptualized the model in this way this research examines how the households of the learners of the study area choose schools.

#### 4. Methodology

In order to understand about the family level determinants of school choice, this study has used logit regression modelling. The coefficients of logit model helped us to understand the direction of the relationship between independent and dependent variables. The main variable of interest was the type of school that the parents have chosen for their child. Independent variables were parental educational level, economic resources of the family, gender and caste affiliation of the students. To accomplish this task we have constructed two separate indexes to represent parental educational level as well as economic resources of the family meaningfully. To construct the indexes, one of the biggest challenges was how to aggregate all the indicators. Aggregation of indicators was made possible by finding suitable 'weight' for each of the variables under each category. The values of the weights show the importance of the indicator in the index. A good number of methods are there in the literature for finding this weight (Decancq and Lugo, 2013).

A) Equal or arbitrary weight: Equal weighting is being used in the construction of Human Development Index (HDI). Here all the indicators are assumed to be equally important. But this can never be a reality. Possession of a land by an individual in a posh area of a city is not equivalent to possessing the same in the outskirts of the city or person having a postgraduate degree can never be equal to the person who is deprived of education. In case of arbitrarily taken weighing, expert opinion has been sought for. But this is also a subjective matter and that must be avoided when the study is measuring something objectively.

B) Linear regression: weight can be measured by the coefficient of linear regression. It requires that data should be normally distributed and non-collinear. In case of highly collinear data, it fails to give true regression coefficient values (Pasha, A. 2015). For example, there is a correlation between the educational level of individuals and their income (Blaug, 1972) and both are important predictors of educational outcome of their children (Chudgar et al., 2010; Edmonds, 2008; Ahmed et al., 2007). All factors may not influence the educational outcome independently. Instead, all factors might have influenced jointly on the dependent variable. Therefore, in order to get 'weight' for each variable that has statistical justification, Pasha, A (2015) suggested the application of statistical tools like Principal Component Analysis (PCA), Multiple Correspondence Analysis (MCA) etc. These data reduction technique address the collinearity issues of the data.

C) Principal Component Analysis (PCA): PCA is the most widely used data reduction technique. It finds application in the study of Filmer and Pritchett (1999, 2001), Bonilla-Chacin

and Hammer (1999), Stecklov, Bommier and Boerma (1999) and many other studies for constructing composite index. A principal component is a linear combination of weighted observed variables. Principal components are uncorrelated and orthogonal. The first principal component will capture the maximum variance and extract the largest amount of information from the data. Here information means variability in the data set. The second component captures the second largest amount of variance in the data and is uncorrelated with the first principal component and so on. The weights can be derived from the linear combination that explains the largest proportion of the variance or by using a weighted average of all the linear combinations (Decancq & Lugo, 2013). But PCA has limitations. We cannot apply it if data set is categorical. This is because that PCA requires that data should be continuous and normally distributed (Asselin, 2009).

D) Multiple Correspondence Analysis (MCA): Introduction of Multiple Correspondence Analysis in the academic field had been traced back in the literary works of French school of statistics under the leadership of J.P Benzecri in 1960's- 70's. In order to work with MCA, we need to have our data to be categorical (nominal) instead of quantitative. MCA has been used as a tool for finding the weights of the categories of different variables in the study of poverty measurement (Asselin & Anh, 2008; Njong & Ningaya, 2008; Ki et al., 2009; Ezzrari et al., 2013; Maity, 2018), in the construction of SES to identify which socioeconomic group is at risk (Cortinovis et al., 1993), in environmental study (Canuel et al., 2014), in the construction of asset index to study on the work participation in urban and peri-urban agriculture in West Africa (Dossa et al., 2011) etc.

The objective of MCA is to reduce the data spreading across the multidimensional space into a more comprehensive low dimensional space in such a way that loss of information will be the minimum. It helps to understand the hidden structure of the data matrix clearly in the low dimensional space. In order to do that data are to be compiled in a matrix format where the subjects are taken on rows and variables are on the Column wise. Each variable may have multiple levels/categories/modalities. Data are to be coded in binary form i.e., possession of any variable by the subject is to be coded as '1' and not possession of that is to be coded as '0'. This matrix is known as indicator matrix. MCA is a PCA process applied on this indicator matrix (Asselin et al., 2008). It helps to find out scale values of each category of the discrete variables and later on it maximises the variances of those scores (Dungey et al., 2018). The first factorial axis will be the axis that represents maximum dispersion (or inertia) of the data points. The second axis will be the orthogonal to the first one and it will have less explanatory power compared to first one. This process continues so long as the total inertia is exhausted. This is called by Asselin (2002, pp. 10) as factorial disaggregation of the total inertia. MCA provides the weight of each category from the first factorial scores which are normalized by dividing the first eigen value (Ki et al., 2009). The composite indicator score of households is calculated by adding weighted binary category variables and averaging and it can be written as (Asselin, 2002, p. 25)

$$CI_i = \frac{(W_1 I_{i1} + W_2 I_{i2} + \dots + W_j I_{ij})}{K}$$

$CI_i$  = Composite indicator score of the  $i^{\text{th}}$  household

$W$  = Weight of the category

$I$  = binary indicator 0/1, taking 1 when household has the category otherwise get the value 0

$j$  = total number of binary categorical indicators

$i$  = number of household

This study used the MCA technique as suggested by Asselin (2002). Household of the students are taken on the row and the categorical variables that measure the human capital and material capital (proxy to measure economic resources of the family) of the households are taken on the column wise. After the completion of the entry of data, it will look like a matrix of which each row profile represents possession of categorical variables by the particular household and each set of column profile represents possession of the particular categorical variable across the household. Now MCA (in SPSS it is called optimal scaling) is applied to this data matrix to find out the association between categories or between rows. The objective is to discover a space with few dimensions within which categories of the variables are placed for analysis. From this lowest dimensional representation of the data, MCA helps to identify those categories that have similar pattern in respect of possession by the household. MCA uses chi-square metric to measure the distance between the columns or between the rows of the data matrix. The term distance means the difference between the pattern of relative frequencies for rows across the columns, and the columns across the rows. Chi-square distance between the two profiles points ensure that low frequency categories get a higher weight while computing the distance. In this way 'weight' of each variable computed and finally we made two indexes namely human capital index and material capital index of the family. These two indexes would represent the family level characteristics reasonably.

Research hypotheses of our study are as follows:

Hypothesis 1: Family level human capital has a significant effect on school choice.

Hypothesis 2: Economic resources of the family have significant effect on the school choice of the parents.

Hypothesis 3: There exists gender bias on the issue of school choice.

Hypothesis 4: Social class identity has significant effect on school choice.

## **5. Sources of Data**

In order to test the research hypotheses, primary data have been collected from the survey area consisting of three blocks of Alipurduar District and the Alipurduar Municipality of West Bengal. Three blocks are Alipurduar I, Kumargram and Madarihat. From each block and municipality two government primary and two private primary schools have been selected on the basis of purposive sampling technique. Therefore, 8 government schools and 8 private schools making 16 schools in total have been taken as sampled schools. In order to accomplish this research work, household survey was conducted to collect the background characteristics of the 304 families of the students of these schools. Therefore, total sample size is 304. Distribution of schools in terms of category and location has been presented in Table 1 below.

**Table 1: Distribution of Schools by Location**

	Govt	Private	Total
Rural	3	3	6
Urban	3	3	6
Municipality	2	2	4
Total	8	8	16

Research hypotheses of this research were tested in the context of the human and material capital possessed by the family of the pupils. Table 2 has listed two indicators, 13 variables and 38 categories/ modalities. From these household level variables under the indicator of human capital and material capital components, two separate indexes were formed named as human capital index and material capital index respectively.

**Table 2: Summary of the Independent Variables**

Indicator	Variables	Category	
Human capital	Educational level of father:	1. No schooling plus primary incomplete	
		2. Primary passed	
	Educational level of mother:	3. Upper primary passed	
		4. Secondary passed	
		5. H.S &above passed	
	Material capital	Materials used to build roof:	1. Tin
			2. Cement
		Materials used to build wall:	1. Mud/bamboo/wood
			2. Tin
			3. Cement
Percapita availability of rooms:	Materials used to build floor:	1. Soil	
		2. Wood	
		3. Cement	
Availability of Kitchen:	1. less than 0.5		
	2. between greater than & equal to 0.5 &less than and equal to 1		
	3. greater than 1		
Availability of drinking water:	1. No		
	2. Yes		

- 1. Public water
- 2. Private water
- Sources of energy for cooking
  - 1. Fire wood
  - 2. Gas
- Possession of T.V:
  - 1. No
  - 2. Yes
- Possession of mobile phone:
  - 1. Basic phone
  - 2. Smart phone
  - 3. No phone
- Mode of transportation possessed:
  - 1. Cycle
  - 2. Motor cycle
  - 3. Car
  - 4. No vehicle
- Possession of refrigerator:
  - 1. No
  - 2. Yes

## 6. Results and Discussion

An open ended question was asked to the parents of the private school to mention reasons for their choice in admitting their children in private school. The same question was given to the parents of government school. The following reasons have been mentioned by the parents.

### Reasons for admission into the private school

- 1) School is nearer to the house.
- 2) Elder brother or sister or other member of the extended family studied in that school.
- 3) Quality of the government school is poor in terms of imparting education.
- 4) Better quality and discipline in the private school.
- 5) Lower admission age of the private school.
- 6) Better subject contents as well as more number of books in private school.
- 7) Infrastructure of the private school is better.
- 8) Friend circle and their family status of the students of private school are better than that of the government school.
- 9) Mid-day meal is disturbing the learning environment of the government school as teachers are heavily engaged with that task along with other official task.
- 10) There is no home task in Govt School.

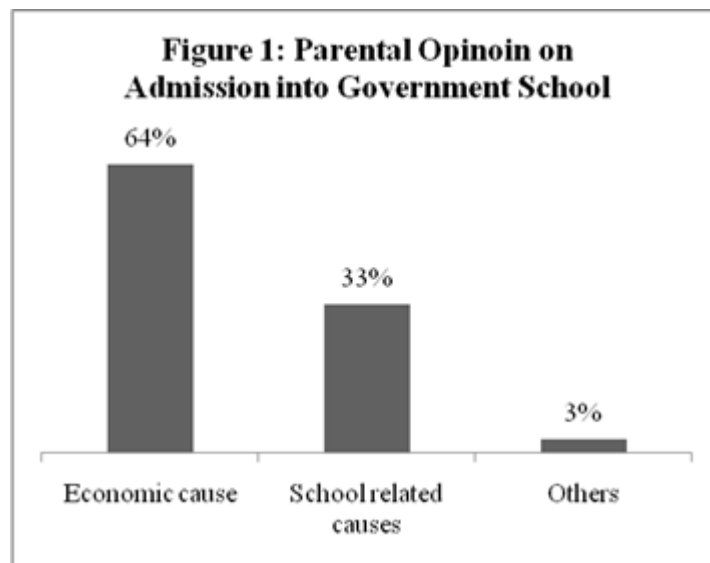
### Reasons for admission into the government school

- 1) Not able to bear the expenses of the private school.
- 2) Government school is providing non-monetary benefit to their students in the form of books, school dress, mid-day meal etc.
- 3) More parental education is required to help the child if admitted into private school. In addition to that private tutor has to be engaged for the child and thus inviting more cost.
- 4) Private school keeps on changing their teachers more frequently so that the education of the child gets hampered.

5) Quality of the government school is better.

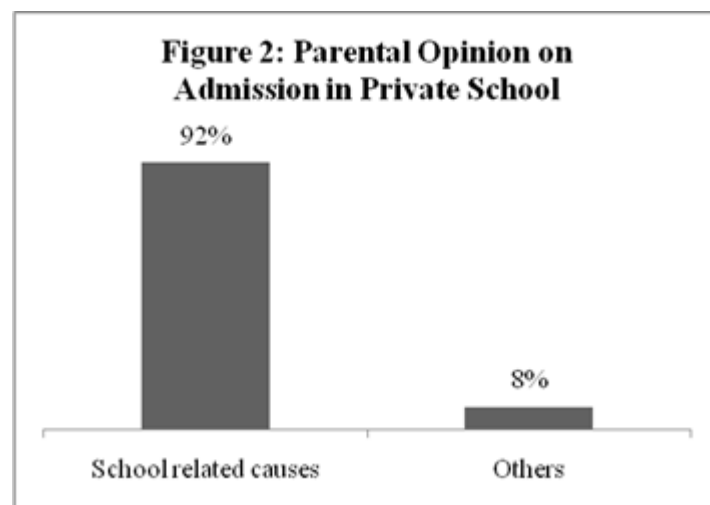
The above causes as mentioned by the parents have been classified into three categories namely, economic causes, school related causes and others. All the responses are converted into percentage. This is shown in Figure 1 below for government schools and Figure 2 for private schools. Of all the causes, economic causes have been cited by 64% of the parents for admitting into government school instead of private schools. While 33% of the parents opined that it were actually the government schools which were catering for the poor people by providing some non monetary benefits in addition to learning. There were 3% of parents who cited the other reasons for their choices.

**Figure 1: Parental Opinoin on Admission into Government School**



Source: Compiled by the authors.

**Figure 2: Parental Opinoin on Admission into Government School**



Source: Compiled by the authors.



In case of the parents of private school, 92% held the views that it was the characteristics of private school that attracted them to admit their children in private school and only 3% opined for other reasons. This study used logistic regression to explore factors that are statistically significant for choosing a particular school by the parents.

Logistic regression model follows logistic function. It is given by formulae

$$P_i(Y_i) = 1 / (1 + e^{-Z_i})$$

$$= 1 / (1 + e^{-(b_0 + b_1 X_1 + b_2 X_2 + \dots + b_n X_n)})$$

Where  $P_i$  = Probability of  $Y_i$

$Z_i$  is a linear function of a set of predictor variables.

Now

$$1 - P_i = 1 / (1 + e^{Z_i}) \quad \text{since } P_i + (1 - P_i) = 1$$

$$\text{And } P / (1 - P_i) = (1 + e^{Z_i}) / (1 + e^{-Z_i}) = e^{Z_i}$$

Taking logarithms on both side,

$$\ln(P / (1 - P_i)) = Z_i = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_n X_n$$

Where  $P / (1 - P_i)$  is known as Odd- Ratio (OR).

In other words,

Probability of occurrence of an event

$$\text{Odd-Ratio} = \frac{\text{Probability of occurrence of an event}}{\text{Probability of non-occurrence of that event}}$$

And  $\ln(P / (1 - P_i))$  is known as log odd-ratio or logit function. The objective of logistic regression is to estimate  $b_0, b_1, b_2, \dots, b_n$  on the basis of observed values of  $X_1, X_2, \dots, X_n$  (Seddighi, 2012). A meaningful interpretation can be obtained in terms of this odd-ratios derived from the output of logistic regression. Odd-ratio reveals the change in odds of being in one of categories of outcome when the value of a predictor increases by one unit (Tabachnick and Fidell, 2013). For categorical variable each category is compared with the reference category. In this study  $P_i$  is the probability of admitting in private school and  $1 - P_i$  is the probability of not being admitted in private school instead they are admitted into government school. Based on literature review this study suggested education level of parents, household wealth, gender and caste affiliation of the students are the important predictors. This study did not consider any school level predictor. This might be a limitation of the study. Descriptions of the variables for this purpose have been delineated below.

*Dependent variable:* School choice (school\_P) is dummy variable where government school = 0 (reference category) and private school = 1

*Independent variables:* Educational level of the father (Reduf): This is categorized into five categories (Table 2).

Educational level of the mother (Redum): This also categorized in to five categories like that of the father (Table 2).

Composite score of material capital (Matcap3cat) categorized into 3. Up to 33% of the score is categorized as 'low', above 33% to up to 66% is 'medium' and above 66% is named as 'high'.

Gender (Gender) is also a dummy variable with boys is coded as '0' and girls as '1'. Caste of the student (SCSTNONSCST) is categorized into two categories. Those students who belong to non-SC/ST categorized as '0' and for SC/ST it is '1'. Result of logistic regression is given in Table 3 below.

**Table 3: Results of Logistic Regression**

Explanatory variables	<i>B</i> [95% C.I.B]	<i>S.E.</i> ( <i>B</i> )	Wald	Odd Ratio
Reduf			5.770	
Reduf(1)	-.056[.39,2.33] <sup>†</sup>	.459	.015	.946
Reduf(2)	.525[.66, 4.31]	.479	1.202	1.690
Reduf(3)	.858[.75, 7.42]	.585	2.151	2.357
Reduf(4)	1.192[1.03, 10.54]	.594	4.032	3.293
Redum			9.778*	
Redum(1)	1.083[1.06, 8.26]	.525	4.256*	2.954
Redum(2)	1.344[1.44, 10.22]	.500	7.222**	3.834
Redum(3)	1.754[1.7,19.66]	.625	7.882**	5.777
Redum(4)	1.851[1.61,25.19]	.702	6.961**	6.367
Matcap3cat			8.463*	
Matcap3cat(1)	.698[.95, 4.24]	.381	3.356	2.009
Matcap3cat(2)	1.743[1.76, 18.55]	.600	8.430**	5.716
gender_F(1)	.437[.36, 1.16]	.298	2.145	.646
scst_Y(1)	-.234[.43,1.46]	.313	.558	.791
Constant	-1.868	.435	18.406***	.154

Omnibus  $\chi^2$  (12) = 127.89,  $p < .001$ ,  $R^2 = .343$  (Cox & Snell), .459 (Nagelkerke)

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ,  $\bar{r}$ -95% C.I for EXP (B)

Significance tests such as likelihood ratio, Wald test, and Hosmer & Lemeshow test suggest no lack of model fit. A logistic regression analysis reveals that there is a significant influence of educational level of mother and family level material capital (proxy for economic resources of the family) on the selection of school by the parent of a student ( $\chi^2$  (12) = 127.89,  $p < .001$ ). The model explained 45.9% variance in the selection of school (Nagelkerke) and was able to identify 76.6% cases accurately. The sensitivity of the model was 77.8% and specificity of model was 75.2%. The results show that as compared to education level 1, i.e., no schooling or incomplete primary education by mother (reference category), the odds of selection of private school rather than government school from the educational level 2, 3, 4 and 5 are 2.95, 3.83, 5.78 and 6.34 times respectively. It can be explained in such way that having passed primary school by the mother of the student rather than no schooling or primary incomplete education multiplies the odds of selection of private school rather than government school by a factor of 2.95. Having an upper primary passed qualification by the mother of the students rather than the no schooling or incomplete primary education multiplies odds of choosing private school by a factor 3.83. On the other hand, educational level of father had no statistical significance on the school choice by the parents. Therefore, it is educational level of mother rather than the educational level of father is an important predictor of school choice. Alternatively, it can be said that the higher the level of educational levels of mother, the better

the chances of selection of private school. Material capital does have a significant influence on the choice of nature of school by the parents of the students. As compared to low position in the material capital (reference category) possessed by the family of the student the odds of selection of private school from category 'middle' and 'high' are 2 and 5.71 times respectively. But being a member of middle position of the material capital is not statistically significant. Therefore, only 'high' material possession which is a proxy of better economic resources possessed by a family has a significant influence in selecting private school rather than government school. This got further support from the finding of the study that 47.9% of parents of the private school actually falls within the highest 1/3<sup>rd</sup> position of the material capital index. There are only 6.6% of the parents of the government school who are coming from the wealthier group (Table 4).

**Table 4: Material Capital Position of the Students by Type of School They Attended**

	Government School	Private School
	N (%) *	N (%) **
1= poorest	78 (56.9)	21 (12.6)
2	50 (36.5)	66 (39.5)
3 = Richest	9 (6.6)	80 (47.9)
Total	137 (100)	167 (100)

Source: Compiled by the authors.

\*Percentage of the sum total of students in Govt school (N=137)

\*\* Percentage of the sum total of students in Private school (N=167)

On the other hand, gender and caste affiliation of the students have insignificant influence on the decision of admission into private schools. Girls and boys are being treated at par while parents are taking decision to admit their child in private school. They are not discriminating on the basis of gender. This is true for the students of SC/ST and non-SC/ST students.

## 7. Conclusion

Earlier studies showed that parental perceptions regarding the characteristics of the school played a crucial role for selecting a particular school, i.e., either government or private school. But many a time this kind of perceptions are misleading and finally parents are ended with admitting their child into a private school whose characteristics do not match with their (parents) perceptions. Parents were often allured with the claim that the school was having English as medium of instruction, but it was not seen in reality. Empirical studies pointed out the existence of broad range of such perceptions of the parents about the characteristics of private schools such as, well disciplined, better quality, more accountability, up-to-date syllabus etc. But until and unless the parents do not have enough economic resources it would not be possible for the parents to send their children in private schools because of higher cost of education associated with the study in private schools. Having hypothesized in this way this study tried to explain the variance in choice of school with the help of family level characteristics only. Other associated variables like human capital at the family level, gender and caste of the students have also been taken for consideration for school choice factors. The study reveals that educational level of the mother and economic conditions of the family are the two important determinants for school choice at the primary level. At this very tender age of the childhood usually it is the mother who takes care of study of the child. So it becomes evident that mother play an important role on the decision of child's educational matter. Educated mother are preferring private schools rather than government school. The more

educated the mother is, the higher is chances of admission into private school. In case of possession of material capital, a proxy for economic status of the family, the findings of the study reveal that there is a significant effect on school choice. But it shows that only for those parents who fell into the category 3 (output in logistic regression in table 3), levelled as 'richest' group, the probability of choosing private school is higher than that of the reference category (here 'poor' group) and the result is statistically significant. This was further supported by the fact that there were 47.9% of the parents of private schools who fell into this richest category who enrolled their child into private schools. Corresponding to this, there were only 6.6% of parents of the government schools belong to this richest category (Table 4). One of the important findings is that there exist no discriminations against the female children in sending them to private school for their study. This might be the result of change in attitude of the parents towards the child's care. Both male and female children received equal attention of the parents. Caste affiliation of children showed no discrimination in case choosing a particular type of school. This may be due to the improvement of educational attainment and economic status of that underprivileged class than before. Therefore, caste affiliation of the child did not reveal any significant effect in the matter of school choice.

## References

- Azim Premji Foundation. (2018). *School choice in low-information environment: A study of perceptions and realities in four states*. Azim Premji University.
- Ahmed, M., Ahmed, K. S., Khan, N. I., & Ahmed, R. (2007). *Access to education in Bangladesh: Country analytic review of primary and secondary school*. [http://www.create-rpc.org/pdf\\_documents/Bangladesh\\_CAR.pdf](http://www.create-rpc.org/pdf_documents/Bangladesh_CAR.pdf).
- Asselin, L.-M. (2002). *Multidimensional Poverty: Composite Indicator of Multidimensional Poverty*. Lévis: Institut de Mathématique Gauss.
- Asselin, L.-M., & Anh, V.T. (2008). Multidimensional Poverty and Multiple Correspondence Analysis. In N. Kakwani and J. Silber (Ed.), *Quantitative Approaches to Multidimensional Poverty Measurement* (pp. 80-102). Palgrave.
- Asselin, L.-M. (2009). *Analysis of Multidimensional Poverty: Theory and Case Studies*. IDRC/CRDI and Springer. New York.
- Blauge, M (1972). The Correlation between Education and Earnings: What does it signify? *Higher Education, 1*(1), 53-76.
- Bonilla-Chacin, M., & Hammer, JS. (1999) "Life and Death Among the Poorest", John Hopkins University and World Bank.
- Canuel, M., Abdous, B., Belanger, D., & Gosselin, P. (2014). Development of Composite Indices to Measure the Adoption of Pro-Environmental Behaviours across Canadian Provinces. *PLoS ONE 9*(7):E101569. Doi:10.1371/journal.pone.0101569.
- Chudgar, A., & Shafiq, M. Najeeb (2010). Family, community, and educational outcomes in South Asia. *Prospects, 40*, 517-534.
- Chudgar, A., & Quin, E. (2012). Relationship between Private Schooling and Achievement: Results from Rural and Urban India. *Economics of Education Review, 31*, 376-390.
- Cortinovis, I., Vellez, V., & Ndiku, J. (1993). Construction of a socioeconomic index to facilitate analysis of health data in developing countries. *Social Science Medicine, 36*, 1087-1097.
- Decancq, K. & Lugo, M. A. (2013). Weights in Multidimensional Indices of Wellbeing: An Overview. *Econometric Reviews, 32* (1) pp. 7-34.
- Desai, S., Dubey, A., Vanneman, R., & Banerji, R. (2009). Private schooling in India: A new educational landscape. *In India Policy Forum, 5*(1), 1-38.

- Dossa LH., Buerkert, A., & Schlecht, E. (2001). Cross Location Analysis of the Impact of Household Socioeconomic Status on Participation in Urban and Peri-Urban Agriculture in West Africa. *Hum Ecol Interdiscip J*, 39 (5), 569-581.
- Dungey, M., Tchatoka, Firmin D., & Yanotti, María B. (2018). Using multiple correspondence analysis for finance: A tool for assessing financial inclusion. *International Review of financial analysis*, 59, 212-222.
- Edmonds, E. (2008). Child labor. In T. P. Schultz & J. Strauss (Eds.), *Handbook of development economics* (pp. 3607–3709). Amsterdam: North-Holland.
- Ezzrari, A., & Verme, P. (2012). *A Multiple Correspondence Analysis Approach to the Measurement of Multidimensional Poverty in Morocco, 2001-2007*. Working paper No. 6087. World Bank Policy Research Working Paper.
- Filmer, D., & Pritchett, L. (1999). The Effect of Household Wealth on Educational Attainment: Evidence from 35 Countries". *Population and Development Review*, 25(1), 85-120.
- Filmer, D. and Pritchett, L. (2001). Estimating Wealth Effects without Expenditure Data – or Tears: An Application to Educational Enrolments in States of India. *Demography*, 38(1), 115-132.
- Goyal, S., and P. Pandey. (2009). How Do Government and Private Schools Differ? Findings from Two Large Indian States. South Asia Human Development Sector Report 30. South Asia Human Development, World Bank.
- Govinda, R., Varghese, N. V., & Carron, G. (1993). Quality of primary schooling in India: A case study of Madhya Pradesh. Paris, France: International Institute for Educational Planning, UNESCO.
- Harma, J. (2011). Low cost private schooling in India: Is it pro poor and equitable? *International Journal of Educational Development*, 31(4), 350–356. doi:10.1016/j.ijedudev.2011.01.003
- Karopady, DD. (2014). Does School Choice Help Children from Disadvantaged Sections: Evidence from Longitudinal Research in Andhra Pradesh. *Economic & Political Weekly*, 49,(51), 46–53.
- Kaur, Satvinderpal (2012): Quality of Rural Education at Elementary level: Evidence from Punjab Man and Development, *Economic & Political Weekly*, L II (5), 58-63.
- Kingdon, G. G. (2007). The Progress of School Education in India. *Oxford Review of Economic Policy*, 23 (2), 168–195. doi:10.1093/oxrep/grm015.
- Ki, J. B., Faye, S., & Faye, B. (2009). Multidimensional Poverty in Senegal: A Nonmonetary Basic Needs Approach. In L. M. Asselin (Ed.), *Economic Studies in Inequality, Social Exclusion and Well-being* (pp. 79–115). New York: Springer.
- Kumar, S. M. (2018). Comparing private and government schools in India: The devil is in the maths. *Applied Economics Letters*, 25(6), 409–414. doi:10.1080/13504851.2017.1327118
- Lahoti, R., & Mukhopadhyay, R. (2019). School choice in rural India: Perceptions and realities in four states. *Economic and Political Weekly*, 54(49), 51–57.
- Maity, S. (2018) Multidimensional poverty status of bodo tribes of Udalgiri District, Bodoland, Assam. *Journal of Economic Development*, 43(1), 29-47.
- Muralidharan, K., & M. Kremer. (2008). Public and Private Schools in Rural India. In F. Chakrabarti and P. Peterson (Eds), *School Choice International: Exploring Public-Private Partnerships*, Cambridge: MIT Press.

- Muralidharan, K., & Sundararaman, V. (2013). Contract teachers: Experimental evidence from India (NBER Working Paper No. 19440).
- Nambissan, G B (2012). Private Schools for the Poor. *Economic & Political Weekly*, 47(41), 51–58.
- Njong, A. M., & Ningaye, P. (2008). Characterizing weights in the measurement of multidimensional poverty: An application of data-driven approaches to Cameroonian data. *OPHI working paper No 21*. Oxford.
- Ohara, Y. (2012). Examining the Legitimacy of Unrecognized Low-Fee Private Schools in India: Comparing Different Perspectives. *Compare: A Journal of Comparative & International Education* 42 (1): 69–90. doi:10.1080/03057925.2011.632537.
- Pasha, Atika. (2015). Regional perspectives to the multidimensional poverty index, Discussion Papers, No. 188, Georg-August-Universität Göttingen, Courant Research Centre - Poverty, Equity and Growth (CRC-PEG), Göttingen.
- Singh, A. (2013). Size and resources of the private school premium in test scores in India (Young Lives Working Paper, 98). London, UK: Young Lives.
- Singh, A. (2015). Private school effects in urban and rural India: Panel estimates at primary and secondary school ages. *Journal of Development Economics*, 113, 16–32. doi:10.1016/j.jdeveco.2014.10.004
- Tabachnick, Barbara G., & Fidell, Linda S (2014). *Using Multivariate Statistics* (6<sup>th</sup> Edition). Edinburg Gate. Pearson Education Limited.
- Seddighi, Hamid R. (2012). *Introductory econometrics: a practical approach*. New York. Rotledge.
- Srivastava, P. (2008). School choice in India: Disadvantaged groups and low-fee private schools. In M. Forsey, S. Davies, & G. Walford (Eds.), *The globalisation of school choice?* (pp. 185–208). Oxford Studies in Comparative Education. Oxford, UK: Symposium Books.
- Steklov, G., Bommier, A., & Boerma, T. (1999). Trends in Equity in Child Survival in Developing Countries: An Illustrative Example Using Ugandan Data. INED.
- Tooley, J., and P. Dixon. (2003). Private Schools for the Poor: A Case Study from India. Working Paper. Reading, UK: Centre for British Teachers.
- Tooley, J., and P. Dixon. (2006). De Facto Privatization of Education and the Poor: Implications of a Study from Sub-Saharan Africa and India. *Compare: A Journal of Comparative & International Education* 36 (4): 443–462.
- Woodhead, M., Frost, M., & James, Z. (2013). Does growth in private schooling contribute to education for all? Evidence from a longitudinal, two cohort study in Andhra Pradesh, India. *International Journal of Educational Development*, 33(1), 65–73. doi:10.1016/j.ijedudev.2012.02.005