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PARENT'S CHOICE FUNCTION FOR WARD'S SCHOOL CONTINUATION IN RURAL INDIA: A CASE STUDY IN WEST BENGAL

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Abstract

In this paper we present a choice function of a rural household about her/his ward's schooling. It makes an empirical evaluation on the basis of simple theoretical framework using primary data set, surveyed from two backward districts of West Bengal. It explores the underlying causes of discontinuation of school of wards by examining choice function of the parents using ordered probit analysis. The likelihood of drop out is higher in primary level towards low income category households and significantly depends on parents' attributes which are mostly endogenous in an educational production function and other exogenous difficulties in accessing school. It is also triggered up by lack of expectation about the future impact of child education on life.

Keywords: *School Education, Dropouts, Household's Choice, Ordered Probit Analysis, Primary Survey Data*

JEL Codes: *C25, C80, D19, I21, I25*

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INTRODUCTION

Literature suggests that education plays an important role in enhancing capabilities and freedom and paves the way for a quality life (Sen, 1985, 1987, 1992, 1999, 2003; Jonathan, 2001; Robeyns, 2003; Hoffman, 2006). Sen (1992, 1999, 2003) insists on the importance of capabilities to function in making normative evaluations about equality and wellbeing, and if at all, economic wealth and income could be termed as indicator of a country's quality life and/or if at all human capital arguments could be used for judging the importance of education only by its success to prepare the educated for employment. Despite success in theoretical research and well attempted policy support, as seen, there exist huge nonattendance and discontinuation in school at all levels across the country. The problem is more complex and severe for the people belonging to the margin. The basic problem lies in the fact that school attendance by students still continues to be low and inconsistent across the globe, especially in developing countries. Now, it is observed that the puzzle of low levels of school attainment in developing countries is usually analyzed according to the standard approach, where it is prior assumed that parents alone make the schooling decision for their children. In this present study, the issue of school non-attainment is influenced by parent-child differences in preferences over schooling and intra-household agency problems. The present study focuses on both the parent as well as the child, since the interaction of both the choice set plays a central role in schooling decisions.

The school dropout scenario in India is "extremely high" as over 80 million children are not completing the full cycle of elementary education, while 8 million are out of school over a period of years (UNICEF, 2014[1]). The dropout rate is skewed towards girls and the

[1]As reported in Economic Times, http://articles.economictimes.indiatimes.com/2014-03-11/news/48118325_1_dropout-unicef-full-cycle.

spread of dropout is much more in the rural areas compared to the urban pockets.

Based on a nation-wide survey, ASER (2011, 2012) reported that around one quarter of enrolled children were absent on any given school day. Among the set of 207 countries for which relevant data on school attendance has been provided by UNICEF (2010), it is seen that India ranks 155. According to UNICEF (2010), 99.5 percent young people (out of a total of 125.4 Million) between the ages of 15-24 who are illiterate in the world and live in the developing world. Around 51.8 percent of these illiterate population are found in South Asia, and, within this 51.8 percent India's share is around 62 percent, making India the home of a little less than one-thirds (40.4 million; 32.2 percent) of all these young illiterate people in the world. Study reveals that of the more than 27 million children in India, who joined in Class I in 1993, only 10 million of them reached Class X, which is only about 37 percent of those who entered the school system and in more than half the states[2], only 30 percent of children reached Class X (Reddy and Sinha, 2010). Indeed true that with the implementation of 'The Right of Children to Free and Compulsory Education (RCFCE) Act, 2009, there has been a gradual decline in the annual average dropout rate from 9.1 in 2009-2010 to 6.9 in 2010-11. On the other hand it is also a fact that there has been more children dropout in 2010-11 as compared to 2009-2010 in 10 out of the 30 states where RCFCE has been notified[3]. Therefore, there are reasons to worry and investigate on the reasons and inner dynamics of these trends that are major hindrances towards inclusive development. Linkage between poverty and non-participation in schools have been noted by Tilak

[2] India has a well-developed three-tier federal structure, comprising the Union Government, the State Governments, and the Local Governments. Here , by 'states' we refer to the second tier, i.e; State Governments.

[3] For details refer to :

- Daily News and Analysis, India, online:http://www.dnaindia.com/india/report_rte-report-carddropout-rate-in-schools-falls_1669959, April 1 (2012) accessed on October 30, 2012.
- Times of India, http://articles. Times of India. indiatimes.com/2012-04-01/india/31269828_1_rte-provisionsdropout-rate-teacher-student-ratio , April 1 (2012) accessed on October 30, 2012

(1996), Ray (1999), Chaudhuri and Wilson (2002), Rastogi *et. al.* (2008), Chudgar (2010), to mention a few. Poverty, as the literature suggests, is not only a state of existence but also a process with many dimensions and complexities. Poverty can be persistent (chronic) or transient, but transient poverty, if acute, can trap succeeding generations by impacting on the economic and social context, including institutions of the state, markets, communities, and households. The impact arising out of poverty cut across gender, ethnicity, age, location (rural versus urban), and income source and only adds to the powerlessness. Poverty is actually a state of life which is an outcome of several interrelated factors. For example, poverty is related with low family income and thereby unaffordability of desired goods and services. In this context, studies by (Colclough *et. al.*, 2000; Brown and Park, 2002; Dachi and Garrett, 2003; Mukudi, 2004; Birdsall *et. al*, 2005; Kotwal and Rani, 2007; Chugh 2011; Glick *et. al.,* 2014) showed that expenditure incurred by the parents and households has a positive relationship with dropout and gendered outcomes. Studies also point out to the relationship between child labour, mothers literacy and school dropouts (Ray, 2000; Bhalhotra and Heady, 2003; Kambhampati and Rajan, 2005; Basu *et. al.*, 2010; Francesca Francavilla, *et. al.*, 2012). However, they do not point out to the reasons as to why, the child is engaged in income generating activities and thus forego her/his future potential of higher earnings and a better life.

In developing countries like India, children typically drop out of school due to their income constraint and the low expected returns from continuing school. Obviously, this has significant long-term impacts like low educational attainment and consequently low levels of human capital accumulation, which in turn imply limited future income earning opportunities. Needless to emphasize that a degree earned from upper secondary education is a precondition for enrolment into higher education and certification in a number of occupations. Given the fact that, the demand for skilled labour will rise in the coming days, dropout will deeply impact the future earnings and employment opportunities by

acting as a potentially important tool for spinning inequality. Additionally, there is an inter-generational effect: children born to parents with low levels of education are themselves more likely to end up with low levels of educational attainment. The problem is more complex and severe for the people belonging to the margin. The question remains as what really has compelled for such non-attendance or in other words, influenced the students from opting out of the school system irrespective of gender? In the developing world do people belonging to the margin continue to the next level of education after elementary, if not what are the binding factors? Do these factors have some pattern in terms of their priority across regions and across groups? Therefore, there is a need to understand the grassroots' dynamics of these issues to device possible 'preventive' measures.

The purpose of this study is to understand the inherent dynamics of causes that influence the decision to continue schooling. Considering both the social and economic causes, an attempt has been made to see if at all economic factors are more pressing for the parents to send their children to school? The views of the actual drop-out are taken into consideration as well for testing the hypotheses proposed. Based on a suitably designed sample survey for two backward regions of West Bengal, the present study would try to address the issues and the problems from a socio-economic perspective in order to understand the inner dynamics that might have influenced the decision of non-attendance.

THEORETICAL FRAMEWORK

Based on the model proposed by Drèze and Kingdon (1999) we here develop a simple model of schooling decisions in the cost benefit framework. Let us assume households income as W_t in the t^{th} period. We further assume that in the same period households consumption is C_t

and expenditure in education is b_t (this may also be termed as the hidden opportunity cost of investing in education). Therefore, the indirect utility function of the household can be written as

$W_t = C_t + I_t$ Where, I_t is the amount of investment that the household might have invested in some other sector and could expect a gain at I_{t+1} with interest rate r. That is, $I_{t+1} = (1+r)I_t$ and if the household invest in education then $W_t = C_t + b_t$.

If benefit from education is $B_t = B(b_t, g_t : X_h, Z_k)$, Where, X_h vector of household characteristics and Z_k is the vector of school characteristics, g_t is the contribution by the government for continuation of schooling through welfare is programs at t[th] period. The perceived benefit from schooling would really be gained in future period, and can be shown as,

$$(B_{t+1}) = B(b_t : X_h, Z_k)$$

We also assume that $B(\bullet)$ is also increasing in Z, the component of which may be thought of as an indicator of 'school quality' , a function of governments intervention.

Let, household's utility function be

$U = f(W, B)$; $U_W, U_B > 0$

Here it is maintained that household's objective function is separable without loss of generality (additively separable utility function) with respect to investment in schooling and consumption. Now if the household chooses to invest in education of the child then surely the household will intend to maximize the total expected utility. That is, maximize $E(U_t) + E(U_{t+1})$. Therefore, the household's total expected utility function will be

$$E\left(U\Big|_{b_t>0}\right) = \lambda^t\left(W_t - C_t - b_t + B_t\right) + \lambda_{t+1}\left(W_t - C_{t+1} + B_{t+1}\right)$$

Let, $b^{*}{}_{t}(W_t, B_t, B_{t+1} : X_h, Z_k)$ be the substitution of the above maximization problem. Then $V(W_t, B_t, B_{t+1} : X_h, Z_k)$ is the maximum value function conditional on child being enrolled. This is always optimal to spend atleast some money on her/his education (in addition to fixed cost). Child will get enrolled if and only if

$$V(W_t, B_t, B_{t+1} : X_h, Z_k) - E(U) > 0 .$$

Further, when a child enrolls, the first order condition for maximization of equation 6 is

$$\frac{\delta E(U)}{\delta b_t} = 0 \Rightarrow b^{*}{}_{t} = U^{/}{}_{w,B} : X_h, Z_k$$

The above simple model leads to several predictions. They are stated below-

(1) $E\left(U\big|_{I_{t>0}}\right) = \lambda^{t}(W_t - C_t - I_t) + \lambda_{t+1}(W_t - C_{t+1} + I_{t+1})$

Household will invest in education if and only if the total expected return from education will be greater than the net expected return from other sources, depending on household' characteristics as well as school quality, $E\left(U\big|_{b_t>0}\right) > E\left(U\big|_{I_{t>0}}\right)$.

(2) If, $\frac{\delta V}{\delta Z_k} > 0$, that is enrollment in school is increasing with respect to school quality. This result applies not only to initial enrollment but also for continuation of school participation over time.

(3) If, $\frac{\delta b^{*}}{\delta Z_k} \equiv -U^{//}{}_{w,B} : X_h, Z_k$ implying that am improvement in school quality raises household expenditure on education, if and only if, the two are complimentary inputs in the utility function. Therefore, in general it is plausible to think that households expenditure in education or decision to continue the schooling of the child and school quality are compliments rather than substitutes. Logically, the

concerned households belonging to the margin would only invest in school education if the foregone income (investments for continuing secondary schooling) would be regained by a significantly higher amount (or even equal) after completion of schooling. If this is not the case, then the present value of costs would be more than the present value of benefits, and one would discontinue education after completion of elementary schooling, which is assumed to be free. The higher the discount rate or opportunity cost, the less likely a student will choose to continue schooling.

DATA AND METHODOLOGY

In order to get the determinants of schooling at the post- elementary level (10-20 years) by testing the relevance of alternative explanations of why children do/do not attend and/or discontinue school in their most formative years a detailed primary data obtained from two backward districts of West Bengal viz. Jalpaiguri and Murshidabad through purposive household sampling. In both the districts the areas were chosen randomly among the most backward villages/ blocks in the said district. The sample of interest will be composed of all children who are observed to have decided to attend school or not, and whose families are involved in that decision. Under these considerations, the estimation will be based on all boys and girls who, at that moment of the sample, are between 10 and 20 years old, single, classified as sons or daughters in the household and have discontinued schooling in 2008-10. In Murshidabad, we had interviewed 146 (60 percent male and 40 percent females) such subjects who had actually dropped out during the period. In Jalpaiguri district the number was 97 (43 percent males, 57 percent females). Given the data set and the proposed hypotheses, we banked upon the 'ordered probit regression' (henceforth, OPR) model for the econometric analysis. Below we present a brief account of using the OPR in the present case.

An ordered probit analysis has been used for the empirical estimation of the underlying reasons for dropping out from the school. This is akin to a generalization of the linear regression model to the cases where the dependent variable is discrete. Underlying the analysis is a "virtual" regression model with an unobserved continuous dependent variable whose conditional mean is a linear function of observed "explanatory" variables. Although is unobserved whose realizations are determined by a select set of independent variables where lies in its domain or state space. By partitioning the state space into a finite number of distinct regions, may be viewed as an indicator function for over these regions.

This specification is known as ordered probit, a technique used most frequently in cross-sectional studies of dependent variables that take on only a finite number of values possessing a natural ordering[4]. Here, the dependent variable is the drop outs at different levels of education, as measured by four categories: never attended any school, drop out at primary level (Class 1-5), drop out at secondary level (6-8), and drop out at higher level (9-10). The dependent variable is discrete, and is naturally ordered since according to the levels of education quality always moves towards improvement.$x_i$is the vector of independent variables, and β is the vector of regression coefficients which we wish to estimate. There is a disturbance term that follows a standard normal distribution. Like the models for binary data, we are concerned with how changes in the predictors translate into the probability of observing a particular ordinal outcome. The estimator which maximizes this function will be consistent, asymptotically normal and efficient. It can be shown that this log-likelihood function is globally concave in β, and therefore standard numerical algorithms for optimization will converge rapidly to the unique maximum.

[4] For more recent extensions on Ordered ProbitModels ,Maddala (1983), McCullagh (1980) have been consulted.

EMPIRICAL RESULTS

As mentioned, the OPR models were estimated for assessing the impact of the identified factors for explaining discontinuation from schooling in different grades with separate set of specifications as shown below in Table **1**.

Table 1: Determinants of School Attendance-Ordered Probit Results

Drop-outs (Dependent Variable)	**Coefficient/ Std. Err.**	**Coefficient/ Std. Err.**	**Coefficient/ Std. Err.**	**Coefficient/ Std. Err.**
Specification	**1**	**2**	**3**	**4**
Sex Of The Child (Boy=1)	0.282 (0.159)	0.082 (0.175)	0.369 (0.175)	0.023 (0.201)
Religion (Hindu=1)	0.028 (0.175)	0.263 (0.189)	-0.001 (0.183)	0.255 (0.208)
Father's Age	0.104*** (0.020)	0.121*** (0.027)	0.113*** (0.024)	0.113** (0.037)
Father's Literacy (Yes=1)	1.974*** (0.270)	2.611*** (0.270)	2.096*** (0.264)	3.224*** (0.470)
Father's Occupation Category(According to principal occupation specified by the respondent)	0.063 (0.063)			0.179 (0.085)
Mother's Age	-0.102*** (0.025)	-0.102*** (0.031)	-0.068** (0.026)	-0.074 (0.039)
Mother's Literacy (Yes=1)	0.597** (0.230)	0.547(0.240)	-0.275 (0.244)	0.283 (0.303)
Working Mother (Yes=1)	-0.421* (0.164)			-2.309*** (0.472)
Total Income Category (Low Income=1, Medium Income=2, High Income=3)	-0.577** (0.185)			0.103 (0.296)

(Contd… Table 1)

(Contd… Table 1)

Drop-outs (Dependent Variable)	Coefficient/ Std. Err.	Coefficient/ Std. Err.	Coefficient/ Std. Err.	Coefficient/ Std. Err.
Specification	**1**	**2**	**3**	**4**
Bad Sanitation		2.972*** (0.452)		3.740*** (0.743)
No Drinking Water		-0.665 (0.405)		-1.076 (0.614)
Exam Fear		-1.044*** (0.243)		-0.708 (0.325)
Torture By The Teacher		0.373 (0.221)		-2.332*** (0.483)
Different Vernacular		-0.307 (0.198)		0.242 (0.332)
No Predicted Return		0.861** (0.336)		1.199** (0.437)
Neighborhood Effect		0.195 (0.236)		
High Tuition Fees		-0.216 (0.291)		0.622 (0.413)
Transaction Cost			-1.646*** (0.263)	-0.625 (0.421)
Aggregate Reasons			0.470*** (0.099)	0.423 (0.363)
Poverty (BPL Card Holder=1)			-1.036*** (0.259)	-0.613 (0.332)
Area (Jalpaiguri=1)			-0.357 (0.212)	-0.160 (0.199)
Dependency Ratio (Earning Member/ Total Member)			-3.856** (1.548)	-14.633*** (3.161)
/Cut1	0.518 (1.076)	3.317 (1.288)	3.436 (1.338)	-3.003 (2.140)
/Cut2	1.700 (1.079)	4.889 (1.304)	4.727 (1.353)	-1.186 (2.145)
/Cut3	2.875 (1.088)	6.179 (1.315)	6.097 (1.362)	0.624 (2.128)
R^2	0.2431	0.3590	0.3031	0.4993
Log Likelihood	-247.95186	-210.00625	-228.31569	-164.03387

Source: Author's calculation based on field survey.

It should be noted that at this point that no variables were removed from the said econometric analysis even if it showed low levels of statistical significance. The reason being, all chosen variables (selected on the basis of literature review and prior knowledge from the field) are important in some way or the other as they are expected to have an impact on the dependent variables, even if small. In assessing the results we have divided the specifications in three distinct categories-

(1) General information and household characteristics- Sex, religion, fathers' age, fathers' literacy, mothers' age, mothers' literacy, principal occupational category of the father, working mothers and family income. Based on the literature here fathers' age, mothers' age, being a girl child (the gender factor), being a non-Hindu, varied occupation (chasing multiple sources to generate income) are expected to bear a negative relationship with school attendance. On the other hand, factors like literacy factor (for both father and mother), working mother and family income should have a positive relationship with school attendance.

(2) Along with the above category the second specification considers causes of discontinuation as was revealed by the respondents during the field visit[5]- Distance of secondary school from home, 'exam fear', corporal punishment in the school, difference of vernacular between school and home, anticipation of no or low returns from continuing schooling, impact of neighborhood, unaffordability of private tuition fees, lack of or unavailability of safe drinking water. All these factors have a binding impact upon the decision to continue schooling and based on the literature, it can be said that the decision to continue schooling is negatively impacted by one and all these factors.

[5] Here we have not considered two specific responses as independent variables during the OPR – 'work at home' and 'sibling care'. The reason being, these are endogenous variables in decision making process in order to continue schooling and they are already captured by other variables.

(3) The third specification consists of the variables like poverty, commutation cost and dependency ratio[6]. Here to differentiate between the poverty ridden families (considered to be a BPL card holder, we have treated the positive responses (=1) of the respondents for whom incidence of poverty was one basic reason for discontinuation. Now, here too, the incidence of poverty, high commutation costs and high dependency ratio hinders school attendance.

Here along with each set of results, for all specifications three cut-off values, R squared and likelihood estimates are reported in

Table **1** and other relevant tables. To mention that the OPR allows us to separate the effect of various factors that influences the likelihood of occurring one level to other level of the dependent variable. Table 1 discusses the probability of discontinuation from school for a child. Given the category of the dependent variable and according to the categorization of exogenous variables we obtained four sets of econometric results. However, since OPR does not give direct relationship between the dependent variables and the independent variables- so for diagnostic purposes we also estimated the marginal effects (and Table 3) after OPR for each specification. Here for the estimation of the marginal effects we have considered two base values of the dependent variable $y_i = \{0,1\}$. Henceforth we concentrate on these two tables for explaining the relationships.

shows that in all the four specifications the coefficients of variables like father's age, father's literacy, are showing a significant relationship. However, all the coefficients carry a negative sign. Primarily it is clear that the decision to discontinue school significantly depend on these factors. Now, we also have a negative sign for these coefficients as obtained while estimating the marginal effects.

[6] Dependency ratio= (Earning member of the family/ Total member)

Table 2: Marginal Effects after Ordered Probit when Y = Pr (Dropouts=Never Attended)

Drop-outs (Dependent Variable)	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**
Specification	**1**	**2**	**3**	**4**
Sex Of The Child (Boy=1)	-0.080 (0.044)	-0.019 (0.040)	-0.096 (0.045)	-0.004 (0.034)
Religion (Hindu=1)	-0.008 (0.051)	-0.065 (0.050)	0.000 (0.049)	-0.046 (0.041)
Father's Age	-0.030*** (0.006)	-0.028*** (0.007)	-0.031*** (0.007)	-0.019** (0.007)
Father's Literacy (Yes=1)	-0.523*** (0.066)	-0.576*** (0.061)	-0.521*** (0.064)	-0.590*** (0.093)
Father's Occupation Category(According to principal occupation specified by the respondent)	-0.018 (0.018)			-0.030 (0.015)
Mother's Age	0.029*** (0.008)	0.024** (0.008)	0.018** (0.007)	0.013 (0.007)
Mother's Literacy (Yes=1)	-0.163** (0.060)	-0.121* (0.051)	0.076 (0.070)	-0.046 (0.048)
Working Mother (Yes=1)	0.122* (0.049)			0.444*** (0.109)
Total Income Category (Low Income=1, Medium Income=2, High Income=3)	0.167** (0.055)			#
Bad Sanitation		-0.269*** (0.044)		0.291 (0.217)
No Drinking Water		0.197 (0.143)		0.139 (0.077)
Exam Fear		0.282*** (0.078)		0.585*** (0.129)
Torture By The Teacher		-0.081 (0.048)		-0.041 (0.058)
Different Vernacular		0.071 (0.046)		0.089 (0.044)

Drop-outs (Dependent Variable)	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**
No Predicted Return		-0.264 (0.122)		-0.327 (0.155)
Neighborhood Effect		-0.045 (0.054)		
High Tuition Fees		0.047 (0.058)		0.114 (0.085)
Transaction Cost			0.468*** (0.078)	-0.136 (0.113)
Aggregate Reasons			-0.126*** (0.029)	0.027 (0.034)
Poverty (BPL Card Holder=1)			0.227*** (0.050)	-0.018 (0.050)
Area (Jalpaiguri=1)			0.099 (0.061)	2.479*** (0.672)
Dependency Ratio (Earning Member/ Total Member)			1.037* (0.427)	-0.068 (0.055)
Y	0 .211	0.151	0.187	0.095

Note: #- Here we have controlled the variable 'income' to get the effect of 'dependency ratio';

The presence of the negative sign for the variable 'father's age' is as expected and signifies that the probability of discontinuation of schooling at early grades would increase if fatherhood is achieved at an older age. That is, for men who became father at a matured age are much likely to discontinue their child from schooling at lower grades. The same is also true for mother's age as well. The variable 'mother's age' shows a significant relationship in specification 1, 2 and 3 with a positive sign and 'mother's literacy' shows a significant relationship with a negative sign for specification 1 and 2. However, the significance levels along with the value of the coefficients are low.

Table 3: Marginal Effects after Ordered Probit when Y =Pr(Dropped Out at Primary)

Drop-outs (Dependent Variable)	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**
Specification	**1**	**2**	**3**	**4**
Sex Of The Child (Boy=1)	-0.025 (0.018)	-0.009 (0.021)	-0.040 (0.024)	-0.004 (0.037)
Religion (Hindu=1)	-0.002 (0.014)	-0.023 (0.016)	0.000 (0.018)	-0.040 (0.030)
Father's Age	-0.009 (0.004)	-0.013 (0.006)	-0.011* (0.005)	-0.021 (0.009)
Father's Literacy (Yes=1)	-0.127** (0.042)	-0.182** (0.055)	-0.154** (0.045)	-0.270*** (0.065)
Father's Occupation Category (According to principal occupation specified by the respondent)	-0.005 (0.006)			-0.032 (0.017)
Mother's Age	0.008 (0.004)	0.011 (0.006)	0.007 (0.004)	0.013 (0.008)
Mother's Literacy (Yes=1)	-0.060 (0.032)	-0.072 (0.042)	0.024 (0.020)	-0.054 (0.063)
Working Mother (Yes=1)	0.033 (0.017)			0.241*** (0.068)
Total Income Category (Low Income=1, Medium Income=2, High Income=3)	-0.025 (0.018)			-0.629*** (0.050)
Bad Sanitation		-0.540*** (0.053)		-0.019 (0.128)
No Drinking Water		-0.007 (0.058)		0.092** (0.037)
Exam Fear		0.037 (0.041)		-0.005 (0.074)
Torture By The Teacher		-0.051 (0.035)		-0.043 (0.058)
Different Vernacular		0.035 (0.027)		0.136 (0.088)
No Predicted Return		0.030 (0.064)		0.028 (0.099)
Neighborhood Effect		-0.022 (0.029)		

Drop-outs (Dependent Variable)	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**	**dy/dx (Std. Err.)**
High Tuition Fees		0.030 (0.050)		0.098 (0.059)
Transaction Cost			0.060 (0.043)	-0.055 (0.030)
Aggregate Reasons			-0.046* (0.018)	0.029 (0.037)
Poverty (BPL Card Holder=1)			0.163** (0.057)	-0.019 (0.054)
Area (Jalpaiguri=1)			0.030 (0.019)	2.651** (0.920)
Dependency Ratio (Earning Member/ Total Member)			0.381 (0.202)	-0.082 (0.079)
Y	0.436	0.554	0.469	0.599

Couple of observations came up through this OPR exercise. We discuss them below in brief. This OPR exercise pointed out to the relationship between discontinuation of schooling and father's literacy. We see that there is a negative correlation between these two variables. The influence of parental education (for both father and mother) acts as a strong determinant of early school discontinuation. Simply being able to decipher native alphabets and being able to write their names and addressed did not enable them to live life with dignity.

Again, we observe that the numeric value of the coefficient shows that amongst all the significant explanatory variables 'father's age' scored the highest value. There are studies (Al Samarai and Peasgood, 1998; Mahmud, 2003; Chugh, 2004;) that shows how the presence of an older father with many siblings influence (negatively by providing minimum resources to the child who he thinks to be in-capable of fetching return from investing in education) the decision to continue schooling of his wards. This essentially confirms our view that the 'decision to continue schooling' is extensively controlled by the 'father' in general- for both male and female school goers. Father being the

principal bread earner of the family, dominates the major decisions in our society- patriarchy still remains a strong feature of the Indian society. Also, this result perhaps confirms the view that a comparatively older father (with many siblings) is unlikely to continue schooling of his children as by then, his income is stretched among many members.

Another important constraint that hinders the schooling of a child is the household or family income of the said child. In our sample we have categorized income into three distinct percentile values (low income =1, medium income =2, high income =3). The result shows a positive significant relationship in the marginal effects estimated by the OPR. This reflects that if income rises from a low level to medium to a high level for the responding families, the probability of discontinuation at early grades decreases accordingly.

In our sample, for children with working mothers, the probability of discontinuation rises only at higher grades. That is, for children whose mothers also earn and add to the pool of family income, the parents prefer to continue schooling so far it is possible for them. This observation may be related to two issues- firstly the rise in family income which supports the cost of schooling and secondly, what has been described as the rise in 'bargaining power' of such women in the household.

The estimation of the marginal effects after the OPR shows reveals a significant relation with bad sanitation with a negative sign. Here, the variable 'bad sanitation' means dry toilets/latrines or even for some cases it may be simple open air grassland or behind the bushes somewhere in the school compound or little away from it.

It was revealed by the variable 'exam fear' with a positive sign. Indeed, as the child climbs up the ladder to higher grades, in most cases they have developed fear for two specific subjects, English and

Mathematics (as was revealed during the field discussion diaries) and eventually led to a retention in the same Class for two to three years consecutively. Eventually, the parents withdrew their wards and engaged them either at home or some income earning activity. This study shows that the origin of such fear has its origin partly in the curriculum that we follow, partly in the mode of teaching, partly in the atmosphere where the child dwells and lastly perhaps the inner passion of the child to accept challenges and overcome it. These are acute issues, but this gradual diminishing path of one's confidence in understanding a subject perhaps get spilled over for other subjects as well, and finally it ends up with the decision to discontinue.

The unaffordability of the commutation cost, as mentioned reveals a significant relationship, here too, with a positive sign. This observation reflects that as the influence of these factors rises, it would not be possible for the parents to continue the schooling much further. Eventually, though they would try to continue till some middle level grades, but finally they decide to discontinue. This is also to be mentioned that though commutation costs here refer to the cost associated with traveling from home to school and back home, in reality the cost associated are much higher as the child grows. For example, as the child climbs up to higher grades her/his friends or peer groups also expand and thus, there arises the need for some extra money as pocket expenses also go up. Further, due to the problem of vernacular and low quality teaching, they have to fall back upon the private tutors for support. Though the utility of a single teacher teaching all subjects may not be beyond debate, however in many places, especially for families with low affordability, they get a chance to send their children to private tutors with a hope that they will at least become able to cope up with the curriculum.

CONCLUSION

As observed, the reasons for discontinuation are varied across income class and complex in nature. The decision for discontinuation of schooling for the ward significantly depends on father's literacy, father's age, nature of occupation of the head of the household, dependency ratio along with average family income. Moreover, mother's participation in decision making process for continuation of school for a child largely depends on her education, participation in the work force as well as her financial contribution towards the family. For the lower income group, poverty and unaffordability of commutation costs are the main constraints towards access to education. Apart from these basic causes, some external factors like, distance to the school, exam fear, low quality teaching evidently, triggered the decision of discontinuation that primarily comes from poverty and unaffordability. The findings reveal that both the family and school related factors were responsible and came out to be extremely linked with each other. It was also found that adolescents dropout not merely due to poverty and financial constraints but also the lack of information about future benefit from education and need of education in life forcing them to dropout. Identifying these binding factors and characteristics, however, is only a first step. This is crucial for understanding how decisions are made; the push and pull factors; how parents and schools approach children discontinuation; and whether the interaction between the two sides could be enhanced at all to pull children back into schools?

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