EQUITY IN THE ACCESS TO SCHOOL EDUCATION: A MICRO STUDY FROM DHENKANAL TOWN, ODISHA

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Abstract: The objective of the paper is to identify the gender difference for the access to education based on a primary study of Dhenkanal town. Considering both the demand and supply situation, the present paper analyse the facilities available for boys and girls children. Here an attempt is made to assess the level of achievements of the children taking into account the enrolment, attendance and learning achievement and to analyse the household factors influencing these outcomes. It is found that with increase the level of education girl's dropout rate is more whereas boy's education is considering as an investment to education. Lack of facilities and lack of expenditure are found as a basic reason for the poor quality education. To measure the difference between the performance of boys and girls dummy analysis is used. Also to find out the determinants of educational expenditure, correlation and regression analysis has been done.

Key words: Equity, Access, Gender Bias, Household Expenditure.

JEL Classification: I0, I2

Introduction:

86th Amendment of the Constitution, 2002 added Article 21A that made education a fundamental right. Subsequently to provide free and compulsory education, Indian Parliament passed the Right to Education (RTE) Act on 4th August 2009 which casts an obligation on the appropriate Government and local authorities to provide and ensure admission, attendance and completion of elementary education (i.e. from class 1 to class 8) by all children in the age group 6-14. But it is found that many children are out of school and good proportion of them is working (Bordoli, 2012; Husain, 2010; Joshi, P.C. 1964; Gul and Khan, 2014). In the supply demand framework it is noticed that there is lack of demand and low quality of supply, together they result in the inadequate access and educational deprivation of children. Inadequate class rooms, lack of teachers and non-availability of teaching equipment and other facilities like drinking water, toilet etc. indicate poor quality of facilities (Tilak, 1995; Chandrapati, 2008). Low demand is mediated through the poor socio-economic conditions of the household (Chaudhuri and Susmita, 2006; Aslam and

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Kingdom, 2008; Gertler 1992; Kingdon, 2005). These households also very often reveal differential demand for education when daughter's education is considered. As they cannot afford for the education of both sons and daughters, the latter is discriminated as the spending on the former is taken as investment and on the latter as simply expenditure which may force them to spend more on them during marriage to find a suitable (i.e. educated) groom. Certain favourable facilities like separate toilet facilities for girls, presence of lady teachers are also important for raising girls' enrolment (Himaz, 2009; Chakrabarti And Joglekar, 2006); rural urban difference in the facilities and enrolment justifies it (Jayachandran, 2002; Banarjee Sudatta, 2012; Ranjan Priya and Prakash Nisith, 2012; Lori Dougall, 2000).

Though enrolment is the first step for promotion of education, regular attendance and learning achievement are of no less importance in this regard. Studies by *Pratham[1]* and other have made attempt to assess the achievement of the children. But these studies have failed to take care of household and school factors together to explain the low enrolment, attendance and learning achievement. Urban areas with better facilities are expected to be ahead of the rural areas in terms enrolment. But learning achievement of the students depends upon the school quality and household's care for child's study. In the rural areas people's choice relating to school quality is very limited but urban areas with varieties of schools (such as Govt./Pvt/Missionary run schools) provide more choices to the people who according

to their income, knowledge and preference choose for their children. In this study an attempt is made to assess the level of achievements of the children taking into account the enrolment, attendance and learning achievement and to analyse the household factors influencing these outcomes. In this process it also examines equity in the access to education. Here the child's access will also be examined taking the individual characteristics like gender, birth order and child's IQ which also influence the household's decision in enrolling the child to a particular school. By keeping all these aspects the study has chosen Dhenkanal town (as the study area) from the district Dhenkanal, an average performing District in all aspects from a poor State, Odisha, which of course has experienced good progress in education. Out of 23 wards of Dhenkanal town, two wards, (and 16 number Wards) are chosen using simple random sampling. From these two wards, households with school going children are considered and using random sampling from each ward 40 households are selected; they constituted approximately 7% of total households and 10% of households who have school going children. Thus, sample size of the study was 80. The ultimate sampling unit was the household. A structured schedule was administered during the month of October, 2015 by the researcher. School dummy is used to examine the difference in the achievement of the students in private and Government schools. Similarly, dummy is also used to study the gender difference in this aspect. In the subsequent sections the findings of the study are discussed.

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[1] It is an Pune based NGO which undertakes survey

Socio-Economic Condition of the Sample Households:

The sample households had representations from different castes and communities; they include STs, SCs, OBCs, GCs and even from minority groups like Muslim and Christian. The composition of the sample households is presented in Figure-1, which shows that General Caste and OBCs together constitute 55% of the total. Since it is a study from the urban area, the share of STs is relatively low compared to their share in the State population.

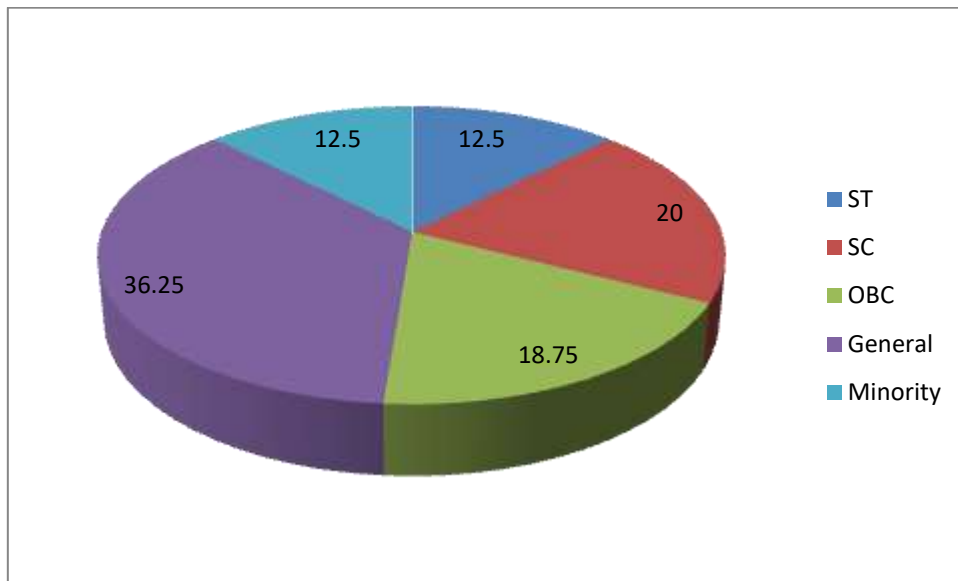Figure-1: composition of sample households

Table-1: Caste and Economic Condition of the Sample Household

Caste	Apl without card	BPL	Antodaya	Bpl without card
General	64%	17%	23%	60%
OBC	8%	29%	23%	0%
SC	0%	42%	15%	40%
ST	12%	13%	15%	0%
Minority	16%	0%	23%	0%

Discussion and Conclusion:

The primary study is containing 122 school going children between the age group of 5-16 (class1-10) both in the government and private school. Out of 122 children, 55.56 % male children are studying in government school and 44.44 % are studying in private school. 61.02 % female children are studying in government school and only 38.98 % female children are studying in private school. The proportion of Government school children are more

than the private school children but the proportion of female children is more in Government school than the male children and the proportion of female children is less in private school than the male children of private school. In overall the sample study reveals that household prefer more to private school rather than Government school for male children than female children.

Table-2: Enrolment rate (Both Male & Female)

Sex	% Government school enrolment	% Private school enrolment	% total enrolment
Male	55.56	44.44	51.63
Female	61.02	38.98	48.36
Total	58.20	41.80	100

Sources: Household survey

It can be predicted that female enrolment is less than the male enrolment. The private school enrolment is less than the government school enrolment but most specifically it is less in case of female children. Due to the high level of expenditure in the private schools peoples are not able to enrolment all him children at private school. But they give their first priority to the male children enrolment at private school expecting a quality education that will help them in future earning (found considering the household having both boy and girl child). It is also observed at the time of data collection that at the initial level of schooling household are preferring private school both for their male and female child but with increase the level of classes people prefer to transfer the girls child from private school to Government school to avoid the increasing schooling expenditure. There are some deviations found between some classes because a very low number of students are considering in some classes in the sample data.

Table-3: Attendance Rate of Children

Attendance of the Students					
	Government		**Private**		**Combined (G+P)**
Sex	%>5 days	% ≤5 days	% >5 days	% ≤ 5days	% >5 days	% ≤5 days
Female	65.71	34.29	96.43	3.57	79.37	20.63
Male	91.67	8.33	100.00	0.00	94.92	5.08
Total	78.87	21.13	98.04	1.96	86.89	13.11

Sources: Household survey

The findings of the study reflect that the private school attendance is more than the Government school attendance (the study is calculated by taking the last week attendance rate of the children when the primary survey was conducted. In comparison to male and female it is found that the male children's attendance is more than the female children both in Government and private school. In

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Government School, more than 5 days male attendance rate is 91.67% where as in private school it is 100%. Both in private school and government school the male attendance is high than the female attendance rate because girls children are involved in various types of household work. The study also found that with the increase in the age of the children (both for male and female) the attendance rate is decline.

Educational attainment:

Access to Education is not only influenced by the availability of schooling facilities but also by the learning achievement of the children. Irrespective of various problems parents do not want to withdraw their children from school only when they are satisfied by the children' achievement. If the educational achievement is good, it has more possibilities of fewer dropouts. Here the learning achievement of the children (both for boys and girls) from the age group of 5-16 is examined.

It is expected that a standard five student can read the text book of class 1 and class 2. But unfortunately more than 50% student are not able to do that, means approximately more than 50 % student are not able to identify letter or to read the simple texts. While for all class level parents are

bearing some opportunity cost and out of pocket cost for the children, this poor achievement will discourage them and they may withdraw their children from school. The date collected from primary survey about the achievement of student in both government and private school are examined by taking dummy analysis.

$$y = \alpha + \beta d + e \ldots\ldots. (1)$$

Where y is Educational Attainment

D is dummy variable (0=Government school, 1= private school)

If d=0, y = α

If d=1, y= $\alpha + \beta d$

$$y = \alpha + \beta d + e \ldots\ldots. (2)$$

Where y is Educational attainment

D is dummy variable (0= girls, 1= boys)

If d=0, y = α

If d=1, y= $\alpha + \beta d$

Table-4: Dummy Results comparing government and private school

Class	R Square	Coefficients	t Stat	P-value	F	Significance F
primary	0.618154	33.16	8.852683	2.69E-12	92.27473	1.61E-13
upper primary	0.423323	40.52632	9.835679	6.79E-10	17.61779	0.00032
secondary	0.290833	46.25	12.216	3.53E-14	14.3537	0.000573

In all the classes it shows a significant change in the private school attainment. The private school educational attainment is better than the government attainment in all the three section primary, upper primary and secondary class.

Table-5: Dummy Results comparing male and female school

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Class	R Square	*Coefficients*	*t Stat*	*P-value*	*F*	*Significance F*
Primary	0.000693	62.73412	5.214901	2.66E-06	0.03953	0.84311
Upper primary	0.085263	29.02381	2.016801	0.055037	2.237062	0.147772
Secondary	0.004467	48.54412	3.828907	0.000511	0.157034	0.694308

Significant but not that much good

Table-6: Taking all factors together (caste, mean year schooling, income, expenditure and attainment)

Caste	Number	Average Mean year schooling	Avg. income	min income	median income	Exp. on edu as % income	Per cent of Students who can		
							read English	Do math	read Odia
ST	10	6.31	156000	24000	108000	4.96	33.33	40.00	40.00
SC	16	7.67	106500	36000	81000	10.56	22.73	31.82	36.36
OBC	15	7.89	150000	36000	120000	17.29	59.52	71.43	73.81
General	29	8.39	256345	54000	180000	11.71	80.95	80.95	85.71
Minority	10	7.55	144000	12000	132000	14.37	35.71	50.00	50.00

Source: Household survey

By analysing caste, mean year schooling of the household, average income of the family, expenditure as a % of income and the learning achievement of the children together, it shows that learning achievement is influenced by all these factors. ST households have the lowest rate of mean year schooling and the lowest amount of expenditure on education. It is 6.31 of mean year schooling and only 4.96 % of his income they spend for their children's education. Similarly as a result the ST children have the lowest learning achievement than other groups. The general children have the highest learning achievement rate than other groups, but the % of educational expenditure is only 11.71 which is lower than the

% of expenditure of OBC. It's because of the high income group people in the general category and the expenditure on education is limited. The minority group children have an average **Expenditure on Education**

Determinants of educational expenditure: Generally, the expenditure on education depends on the household's income, family size, number of school going children, quality of education received and so on.

Income of the household: Expenditure of a person depends on income and educational expenditure is not an exception. Educational expenditure of the household is also determined by the income of the household. Every household (both of lower income group and higher income group have to spend some amount as educational expenditure of their children. Higher income group prefer to do some more expenditure for the better achievement of their children such as expenditure on private tuition, purchase of extra books, coaching for extracurricular activities, etc. Thus, the income of the household is positively correlated with the educational expenditure, and found to be statistically significant.

Education level of the household head: The literacy or education of a student also depends upon the education and awareness of the parents. If the parents are educated or well aware, they will encourage their children to go to school rather than

performance also. It is more than the SC, ST children and less than the OBC and general children.

making engage them in some work for earning money to support their family. Educated parents will prefer to do more expenditure on education than other type of expenditure, such as private tuition, more books and sanitation, etc.

Caste of the house hold: If the household belongs to a lower society or caste group, their culture, social factor and specially the neighbourhood effect adversely influence the education of their children. Rather than paying some fees in the education of the children they mainly prefer to use the children for various works to earn some money. It is generally expected that, a higher caste household shows more willingness for the educational expenditure of their child and more concourse about the education of them.

Mean year of schooling: Mean year of schooling is the sum of the education of all the member of the family divided by the size of the family member. It is more important to influence the children's education than the other factors such as head's education. If most of the family members are illiterate then the educated head of the family will not be able to motivate them about the importance of education. The decision of the other family member is also positively associates to determine the educational expenditure of the children.

Value of correlation coefficient (r) of educational expenditure with the related variables

Table-7: Correlation analysis							
		Educational expenditure	Income of household	caste	Head education	Mean year schooling	Family size
Educational expenditure	Pearson Correlation	1	.509**	.216	.322**	.429**	.176
	Sig. (2-tailed)		.000	.055	.004	.000	.119
	N	80	80	80	80	80	80
Income of household	Pearson Correlation	.509**	1	-.026	.329**	.204	-.177
	Sig. (2-tailed)	.000		.822	.003	.069	.117
	N	80	80	80	80	80	80
Caste	Pearson Correlation	.216	-.026	1	-.107	.221*	.404**
	Sig. (2-tailed)	.055	.822		.346	.049	.000
	N	80	80	80	80	80	80
Head education	Pearson Correlation	.322**	.329**	-.107	1	.446**	-.190
	Sig. (2-tailed)	.004	.003	.346		.000	.091
	N	80	80	80	80	80	80
Mean year schooling	Pearson Correlation	.429**	.204	.221*	.446**	1	.070
	Sig. (2-tailed)	.000	.069	.049	.000		.535
	N	80	80	80	80	80	80
Family size	Pearson Correlation	.176	-.177	.404**	-.190	.070	1
	Sig. (2-tailed)	.119	.117	.000	.091	.535	
	N	80	80	80	80	80	80

** means significant at 0.01 level

* means significant at 0.05 level

It is thus found that the three variables (i) income of the household (ii) mean year of schooling (iii) education of the household head is significantly correlated with the educational expenditure of the household.

The functional form of the model is Household Education Expenditure = f (mean year

of schooling, family income, education of the head). The specified model is

$$Eduexp = \alpha + \beta_1 mys + \beta_2 fy + \beta_3 hed + e$$

Where eduexp refers to the educational expenditure

mys = Mean year of schooling

fy = family income

hed = education of the family head

The regression output states that there is a direct positive relationship between education expenditure and all the determinants taken in the model. All the independent variables have positive and significant influence over the education expenditure. Among them income of HH has the highest influence on education expenditure.

Table-8: Regression Output of Determinants of Education Expenditure

Dependent Variable Educational Expenditure		
Independent Variable	Mean year schooling	0.232
	Family income	0.56
	Head education	0.107
Intercept		-7.196
R^2 value		0.516
Adjusted R^2 value		0.497
F value		27.018

The expenditure on education is not equal for all class. For the higher class educational expenditure is more than the lower class. Thus by taking all the class together, we cannot define the relationship of household expenditure and the household income properly. But here due to low sample size it is not be possible to determine it class wise. The above table shows that only the family income affect 56% of the educational expenditure. Among the mean year of schooling and the education of the family head, mean year of schooling is more important than the education of the head. So these two (family income, mean year schooling) are accepted as the most important determinant of educational expenditure of the household.

Following conclusions are derived

- We observed that among the HHs the people are thinking that expenditure on extra-curricular activities is very less as they would like to spend on education related things. The low income group HHs are sending their child to govt. school due to income constraint but they are also aware about good education for that they are sending their child for tuition at matriculation level out of compulsion; it's one of the good points to be concluded.

- Research has also found low income group people preferred to send their small child (age group of 3 to 7) in semi-private school due to constraint of money because they think that their child is secure in

- terms of either education or his/her presence at school hour.

- School related factors are more important than the household related factors in affecting enrolment.

- House hold poverty, lack of education among parents may not be hindering enrolment when other facilities are good. These provide a hope for more educational achievement.

- Finally the role of government, in improving the access is very important. Intervening through right variables and right way a significant progress is expected.

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