

## **INFLUENCE OF DEMAND SIDE DETERMINANTS ON GIRLS' EDUCATION: AN EMPIRICAL STUDY IN HAILAKANDI DISTRICT OF SOUTHERN ASSAM**

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**Abstract:** In attaining overall socio-economic development of a country, education is globally recognized as a crucial factor. Girl's education is an input for women empowerment thereby reducing gender discrimination in education. Though researchers studied on different aspects of girl's education but there is no study on addressing the factors which influence the girl's educational attainment. This study is an attempt to investigate the enrolment scenario of girls from lower primary school to higher secondary school and the influence of demand side factors on enrolment across residential status in Hailakandi district. Ordinary Least Square Regression model and basic descriptive statistics has been used in the study for data analysis. The study has the outcome that rural girls are far lagging behind urban girls in educational attainment. The statistically significant influential factors behind this differential achievement have been found to be the factors like age of parents, household's economic conditions, residence etc.

**Keywords:** Socio-Economic Development, Women Empowerment, Economic Condition of Households, Ordinary Least Square Regression

### **Introduction:**

Across the globe, it is widely accepted the fact that, development of human capital and human resources in a country largely need education as an important input. In societal context, both boys and girls need quality education to acquire skill, efficiency and knowledge to understand and take part in the developmental process of the economy. However, the most unfortunate fact is that, the two genders like male and female are not provided the equal accessibility in educational enrolment and outcomes. But they should be given equal opportunities in educational aspect to attain balanced educational attainment unless egalitarian norms are violated which harms economic development. In overall aspect of education, girl's educational attainment refers to the acquirement of educational grades which leads to achievement of skill, knowledge and efficiency. Girls' education is widely considering as a component to create skilled women section in society which necessarily empowers them to contribute in economic development of the country. Educated women are treated with honour in the society which inspires female education. The educational strategy of female education leads to sustainable economic growth and development. Research reflects that, education leads to employment and empowerment of women which automatically leads to decision making power of them along with men. Education of girls in present days will definitely contribute to the wellbeing of the future generation as a mother is the first teacher of a new born baby to provide right direction of life. As per UNESCO data, increase in the education of girls can lead to proper baby care, nurture along with quality education which is a positive sign of economic growth of the country. Educated mothers acquire life skills and reproductive awareness to maintain healthy family life (Colclough, C., Rose, P & Tembon, 2000). It is well known to everybody that India is growing rapidly in terms of population which further aggravates the problem of food, shelter and other basic amenities of life to survive. In this context female education is more crucial to create awareness of a small family in terms of family planning. However, even after realizing the importance and necessity of girls' education, girls are still deprived of education in many different contexts. The traditional belief that, a girl is born to serve men by working as a cook, helper, cleaner etc are underlying factors to understand the lower educational attainment of girls' education. The male literacy in India is 82.14% and female literacy is 65.45 % (Census of India, 2011). This figure clearly signifies the low educational attainment of girls. The available theoretical and empirical literature suggests that, although school enrolment has been increased but in rural areas significant gender differences in educational access and attainment still

exists (Alabi, T & Alabi, O.S, 2014; Horne, R. 2000). Household level factors like wealth, education, number of siblings have significant impact on education of girls (Smiths, J & J. Huisman; 2012; Sarkar, R.K, M. Reza & E. Hossain, 2014)). Parental factors like education of parents, age, income exerts positive influence on education of daughters (Jensen, B & Seltzer, A. 2000). It has been found that, parental support and provision of educational input has significant impact on girls' educational attainment (Muriithi, P.M, J.G. Mwangi & M.O. Udoto (2014). Others found that, ethnic background, household location, family composition, presence of siblings, parental income and economic conditions are significant determinants of education of girls (Considine, G. &G.Zappala, 2002). Household resources exert more influence on daughter's education compared to education of sons. Mother's education is positively significant to the educational attainment of daughters (Sackey, H.A, 2007; Marbuah, D & A. Asamoah, 2017). Besides these, several supply side factors like unpunctuality of teachers, unfeasibility of school building, poor financial status of parents, lack of basic facilities leads to low educational attainment of girls (Suleman, Q et al., 2015; Shahidul, S.M &Z.Karim). Parental perception has been found to be important for school enrolment of children (Igei, K & T. Yuki, 2015; Keiko, A & T. Yoshinori, 2006).

Having discussed the importance and necessity of girl's educational attainment in overall aspect of socio-economic development in the light of some previous studies, this study is a noble attempt to address the issues associated with education of girls. It is thus well realized that, without the education of girl's expansion of economic development through the strategy of egalitarian norms cannot be achieved. With the broad objective to address the issue of educational attainment of girls, the present study has been conducted in Hailakandi district of southern Assam.

#### **Objectives of the Study:**

The specific objectives of the study are- (i) To understand the enrolment status of girls in different levels from Lower primary to Higher Secondary classes and (ii) To investigate the demand side factors which influence the educational attainment of girls in the study area.

#### **Data Source and Research Methodology:**

##### **Population and Study Unit:**

At the very outset to identifying the population of the study, total number of rural and urban households of Hailakandi district has been specified with the help census and other secondary sources of data. According to the record of statistical Handbook of Assam, 2015, the total number of households of the district are 133091 and 10259 in rural and urban area respectively. After specification of the population, household of the targeted children is specified as study unit for data collection.

##### **Sample Design:**

Sample design of any study is considered as the blue print for data collection especially in case sampling data. Sample size is 383 which is basically the 383 number of households selected from the population. To make the sample representative of population, sample design has been done by using the formula given below-

$SS = \frac{Z^2 \cdot P \cdot (1-P)}{C^2}$ , where, SS= Sample Size, Z= Confidence level, P= Percentage picking a choice, expressed as decimal, C= Confidence interval, expressed as decimal

As per calculation using above formula, a total number 283 households have been specified from rural area and 100 number of households have been specified from urban area as per details of sample design presented below:

##### **Sample Design of the Study:**

Name of the Circles	No. of HH specified (Rural)	No. of Households (Urban)
Hailakandi	62	68
Lala	90	25

Katlicherra	74	0
Algapur	57	7
<b>Total</b>	<b>283</b>	<b>100</b>

### Data Sources:

This study has been conducted using primary data collected from Hailakandi district as per specification of sample design. The basic instrument used in the data collection was pre-tested well defined and well-structured household survey schedule. The purposive sampling method has been used during the field survey in the four revenue circles of the district to collect the required data. The circles are Hailakandi, Lala, Algapur and Katlicherra revenue circles. Moreover, data from urban area has been collected from Hindustan Paper Corporation (HPC) Township under Algapur revenue circle, Hailakandi Municipality area under Hailakandi revenue circle & and Lala Town area under Lala revenue circle. The data collection unit is the households of said areas and the parents as well children were the respondents of the survey.

### Theoretical Frame Work:

In order to understand and to investigate the demand side factors influencing girls' educational attainment in the study area, a set of variables have been selected with the help of extensive survey of literature. To understand the impact and influence of different demand side factors, the variables used in the study are categorized as dependent variable and independent variables. The dependent variable of the study has been defined and specified as GAE as mentioned in serial No. 1 and a set of independent variables have been defined and specified as mentioned in serial No. from 2 to 17.

**1. GAE= Girl's Average Education (in years):** This variable is denoted as **GAE** and is estimated by taking the average education attained by Girls belonging to age group 5-18 yrs. of the households

**2. FE=Father's Education(in years):** This variable is denoted as **FE** and is measured by the completed years of father's educational attainment.

**3. ME= Mother's Education (in years):** This variable is denoted as **ME** and represents the completed years of Mother's educational attainment

**4. HHI= Household's Income (in Rs.):** This variable is denoted as **HHI** and represents the total annual income of the households from all sources.

**5. HHA= Household's Assets (in numbers):** This variable is denoted as **HHA** and it represents the number of assets found available in the household out of 8 specified assets which are TV, Computer, Cycle, Motor Cycle, Car, Radio, Refrigerator and Mobile Phone.

**6. FS= Family Size (in numbers):** This variable is denoted as **FS** and it shows the total number of persons in a family who are sharing the same kitchen, joint or nuclear.

**7. RESI= Residence (dummy):** This variable is denoted as **RESI**, a **dummy variable** assuming value 1 if the household is located in rural area, 0 otherwise.

**8. FA= Father's Age (in years):** This variable is denoted as **FA** and it represents father's current age in years.

**9. MA= Mother's Age (in years):** This variable is denoted as **MA** and it represents father's current age in years.

**10. EL= Electricity:** This variable is denoted as **EL**, a **dummy variable** assuming value 1 if the household has electricity; 0 otherwise.

**11. NR= Number of Rooms:** This variable is denoted as **NR** and it shows the total numbers of rooms available in the household.

**12. POM= Parent's Outside Mobility Score (in numbers):** This variable is denoted as **POM** and it is calculated by the sum total of values assigned to the following types of movement of parents outside locality - Many times=2, Few times=1, Never=0.

**13. AD= Average Distance from school (in km):** This variable is denoted as **AD** and it represents the average distance of household from the schools the children are found enrolled in or completed grades from.

**14. SOG= Social Group:** This variable is denoted by **SOG**, a dummy variable assuming the value 1 if the household belongs to General category, 0 otherwise.

**15. ECC= Economic Condition:** This variable is denoted by ECC, a dummy variable assuming 1 if the household is Above Poverty Line, 0 otherwise

**16. LS=Live Stock:** This variable is denoted as LS, a dummy variable assuming 1 if the household has livestock like cow, goat, buffalo, hens and ducks, pigs etc, 0 otherwise

**17. OCHH= Occupation of Head of Household:** This variable is denoted by OCHH, a dummy variable assuming 1 if the head of the household is regular salaried, 0 otherwise.

**Statistical Tools and Econometric Models:**

To achieve the targeted objectives in the study, data analysis has been done with the help of basic descriptive statistics like tabular and diagrammatic presentation. Scenario of girl's educational attainment in the different levels of education has been presented with the help of both tabular and diagrammatic presentation. Further, to investigating the factors influencing girls' educational attainment in the perspective of demand side factors, a multiple regression model has been constructed with the help of variables defined in the theoretical framework. The regression model is given below-

**Model-1: Analysis of Factors Influencing Educational Attainments of Girls- Multiple Regression Equation**

$$GAE = \alpha + \beta_{1i} FE + \beta_{2i} ME + \beta_{3i} HHI + \beta_{4i} HHA + \beta_{5i} FS + \beta_{6i} RESI + \beta_{7i} FA + \beta_{8i} MA + \beta_{9i} EL + \beta_{10i} NR + \beta_{11i} POM + \beta_{12i} AD + \beta_{13i} SOG + \beta_{14i} ECC + \beta_{15i} LS + \beta_{16i} OCHH + U_i$$

Where,  $\beta_i$  are the regression coefficients and  $U_i$  is the random disturbance term.

**Results and Discussion:**

**Enrolment Status of Rural Urban girls in the Study Area:**

In this sub section, number of girls enrolled in different classes across rural and urban areas has been analyzed with the help of tabular and diagrammatic presentation. The results have been presented both in absolute and percentage terms.

**Table: 1 Girls Enrolment in Different Classes across Residence**

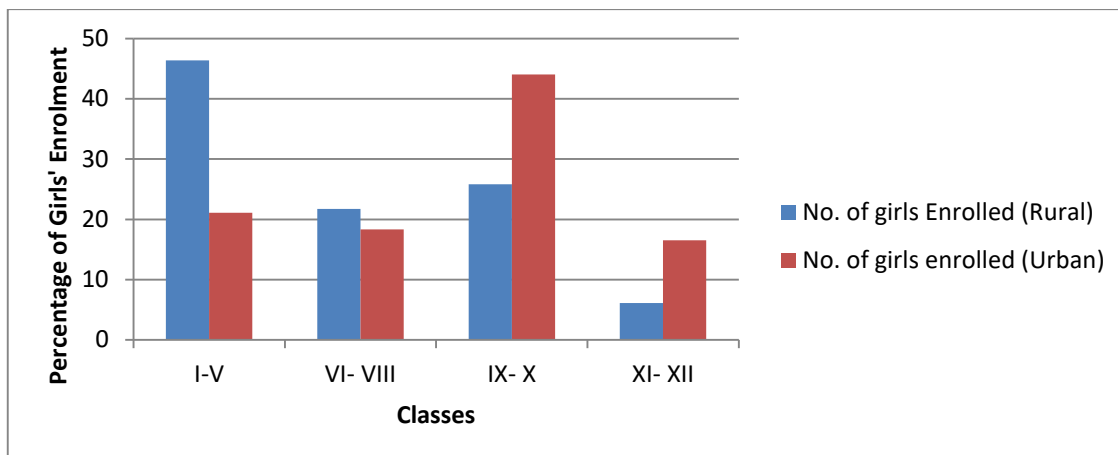
Classes	No. of girls Enrolled (Rural)	No. of girls Enrolled (Urban)
I-V	160 (46.38)	23 (21.10)
VI- VIII	75 (21.74)	20 (18.35)
IX- X	89 (25.80)	48 (44.04)
XI- XII	21 (6.09)	18 (16.51)
Total	345 (100)	109 (100)

*Source: Field Survey, Figure in the parentheses indicate percentage to total*

Table 1 shows the enrolment of girls in the study area in different classes in both rural and urban areas from lower primary to Higher Secondary classes. It has been found that, in the primary level, enrolment of girls' is higher in percentage in rural area compared to urban area. However, in the enrolment of secondary and higher secondary classes, percentage of girls enrolled is higher in urban area compared to rural area. Out of total enrolment in lower primary section, 46.38% rural girls are enrolled in schools compared to only 21.10% enrolment in urban area. In the Upper primary section, percentage of girls enrolled in rural and urban areas are 21.74% and 18.35% respectively. In the secondary classes, 25.80% rural girls are enrolled compared to 44.04% enrolment of urban girls in the same level of education. However, in higher secondary classes, only 6.09% rural girls are enrolled compared to 16.51% urban girls enrolled in the same level of education. The table is presented in the figure 1(A)

**Figure 1(A)**

**Diagrammatic presentation of Girls Enrolment in Different Classes across Residence**



The descriptive statistics of the variables in regression model-1 are presented in table 2

**Table:2 Mean and Standard Deviations of dependent and independent variables**

Variables	Mean	Std. Deviation
GAE	6.5487	3.13030
FE	9.4974	3.98406
ME	8.8377	3.91442
HHI	194655.3665	123917.42659
HHA	4.2749	1.22114
FS	5.3613	1.28605
RESI	.7382	.44018
FA	46.1780	7.13902
MA	39.4005	7.05876
EL	.8482	.44425
NR	3.4607	.95696
POM	2.5340	2.27681
AD	2.2481	.91598
SOG	.6073	.48898
ECC	.3220	.46785
LS	.4555	.49867
OCHH	.2696	.44435

*Source: Estimated by the author using primary data.*

Table 2 shows that, Girl's average educational attainment has been found to be class VI passed with SD value of 3.13. Average educational attainment of sample parents is Class IX for fathers and class VIII for mothers though with variation in educational attainment. The household income on an average is Rs. 194655.37 per annum with huge variation in income at household level as indicated by high value of standard Deviation. The average father's age is 46 years and that of mother is 39 years implying the fact that majority of parents are at an advanced stage of their fertility span. The average family size has been found to be of more than 5 members and all the sample households are nuclear in type. 73% girls are residing in rural areas. So far as outside mobility of parents is concerned, it has

been found that parents have average mobility score of 2.5 out of total score of 3. However, high value of standard deviation in the context of such variables indicates that there are parents who have very little or no outside mobility at all. The average distance from residence to schools have been found to be 2.24 Km which demands set up of schools within 1 km area of residence of girls.

The estimated regression result of model 1 is shown in the table 3

**Table: 3Regression Result**

**Dependent Variable: GAE**

Variables	Coefficients		t	Sig.
	B	Std. Error		
(Constant)	-3.531	1.344	-2.626	.009
FE	.017	.046	.365	.715
ME	-.014	.050	-.286	.775
HHI	1.277E-06	.000	.743	.458
HHA	-.167	.119	-1.403	.161
FS	.024	.119	.198	.843
RESI	-1.174	.542	-2.168	.031
FA	.087	.041	2.136	.033
MA	.170	.042	4.013	.000
EL	.629	.299	2.101	.036
NR	-.013	.175	-.075	.940
POM	-.142	.095	-1.505	.133
AD	.040	.202	.199	.842
SOG	-.076	.272	-.278	.781
ECC	.976	.451	2.165	.031
LS	.299	.305	.983	.326
OCHH	-.227	.401	-.567	.571

R Square Value: 0.447, Adj. R Square: 0.422, F Value: 18.41 (Significant at 1% level)

*Source: estimated by author using primary data.*

Table 3 gives a summary of regression model 1. Though it has been found that, almost all the variables have causal association with dependent variable as expected, only 5 variables are found to have statically significant impact on the dependent variable. The variables like Father's Age, mother's Age, and availability of electricity and economic condition of households have positive and statistically significant impact on educational attainment of girls. It implies that, higher the age of parents, higher is educational achievement of girls. Moreover, availability of electricity and APL households increases the educational attainment of girls. However, it has been found that, residence has negative and statistically significant association with the dependent variable implying the fact that girls living in rural area have less educational attainment compared to girls living in urban area. The regression model is found to be good with statistically significant F value and independent variables have explained nearly 42% of variation in the dependent variable.

**Conclusion and Policy Suggestions:**

So far as the foregoing discussion in the study is considered it is found that, in the rural segment of Hailakandi district, in case of primary schooling comprising of lower and upper primary section, percentage of educational enrolment of girls exceeds the percentage of girls enrolled in the urban segment in the same level of schooling. Surprisingly however, in case of secondary and higher secondary level schooling opposite case has been found. Percentage of girl's enrolment in the said section in urban area has been found to be high compared to the enrolment of girls in the rural area in the same level of schooling. This interesting finding reveals the fact that, tendency of educational enrolment of girls is much higher in the urban area compared to rural area with the increase in the level of schooling. This necessarily reflects the demand for higher education of girls in urban area and rural girls are in far lagging behind. This disadvantageous position of rural girls is also evident from

the outcome of the results of the regression model analysed in the study. It has been found that, crucial demand side factors like age of parent's economic condition and availability of electricity exerts positive and significant influence on girl's educational enrollment and attainment. However, rural residence exerts negative significant impact on girl's education. Thus, it is suggested that, government must provide employment opportunities in rural as well urban areas to enhance the economic condition of households and also the provision of electricity is a crucial input for girl's education. As rural girl's face several difficulties to enroll themselves in far flung rural schools and colleges, a greater number of schools and colleges must be established in rural Hailakandi district which will have a positive impact on girl's schooling and educational attainment in rural segment of the Hailakandi district.

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