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## **An Economic Analysis on Years of Schooling of the Children Related to Financial Support from Family and Govt. & Non-Govt. Institutions**

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### **ABSTRACT**

This study examined the relationship among father's education, amount of father's land (Dec), fathers occupation, any government help, and years of schooling in the rural area at Muktagacha Upazila in Mymensingh Division. Qualitative variables and variables which are quantitative in nature have been used for this study. We have chosen the years of schooling of the children of households as a dependent variable and the selected independent variables are father's education; fathers land amount, father's occupation, male, rural, number of siblings, age antigovernment help. A Convenient sampling procedure has been used in our research. Questionnaire and structured interview were the research instruments. Not only an urban area is counted for research but also rural households are counted for data collection about school-going children. We conducted our research by using primary data.

**Keywords:** Years of schooling, Regression, Data, Variable study, Education, Economic, and Development.

### **INTRODUCTION:**

In this study we have examined the relationship "Among father's land amount, father's education, number of sibling's, age, rural, male, government help and years of schooling". We know that education is the important factors of nation's advancement. Transformation of human in human capital, sustainable investment in educational sector is no alternative with sustainable economic growth for development of nations.

High Living standards and progress of the society smooth the path of the individuals to reach in life ceiling. That's why we have chosen the topic - years of schooling. With the increase of schooling, the number of educated person will also increase in the society. And in this case father's education, occupation, and financial solvency play a great role in the generation's educations/increasing years of schooling. Increased

labour productivity, effective use of waste land and improve socio-economic empowerment are three important routes through which education can contribute to development. That's why our aim was to find out the educational level and the factors which influence the years of schooling in the rural area. Without increasing schooling time it is not possible to remove illiteracy from the rural area.

### **Literature Review**

Only after reviewing the related literature, a researcher can answer the question of what information is already available and what the knowledge- gap is. For this, it is necessary to study a number of research works on supporting the research topic. But we do not found any research paper showing relationship among years of schooling, age, male, rural, father's education, and government help. And also not found any article

showing any relation among years of schooling and others variable.

**Aims and objectives of the study**

The main theme of this study was - to determine the relationship among years of schooling, father’s education, father’s land amount (decimal), father’s occupation, number of sibling’s, age, rural, male and government help. This relationship would be positive or negative. Since we assumed that there exists positive relationship, after collecting data and running a regression the result which we got was positive and goodness of fitness was better.

**Limitations of the study**

Every task has some limitations. We faced some usual constraints during the period of data collection and preparing this article. Though we have given utmost effort to prepare this report but there were some limitations of this study. These are as follows-

- Different Format Data and lack of data related to this topic.
- We could not include other variables in the model which also affect the dependent variable.
- Technological Problem
- Transportation Complexity.
- Respondents were not interested to provide exact information that we need to know.

**Sources of Data**

Data collection procedure involved the technique which is used by the researcher in data gathering. In our study, we have collected our required data from primary sources through self administered questionnaire. The questionnaires were structured in a way to capture information from the student who is running to study.

**METHODOLOGY:**

To find out whether or not father’s education, father’s land amount, number of siblings, father’s occupation, male, age, rural and government help have any influence on years of schooling, a linear model was created with five dummy variables, two for occupation whether agriculture or not and service holder, other two for the location and gender and another one is government help. Since here we have use two types variables, so we can use an ANCOVA model for our regression analysis.

Years of schooling,

$$Y_s = \beta_0 + \beta_1X_L + \beta_2X_E + \beta_3FD_A + \beta_4FD_S + \beta_5X_{Age} + \beta_6X_{sib} + \beta_7D_G + \beta_8D_R + \beta_9D_{GH} + U_i$$

$\beta_0$  = benchmark category = female, business, urban and others help.

$Y_s$  = Years of schooling

$X_L$  = Fathers land amount,

$X_E$  = Fathers education,

$X_{sib}$  = Number of siblings.

$X_{Age}$  = Age of the student,

$FD_A$  = 1, if Fathers occupation is agriculture.

= 0, if business/otherwise.

$FD_S$  = 1, if Fathers occupation is service holder.

= 0, if business/otherwise.

$D_G$  = 1, if gender is male.

= 0, if gender is female.

$D_R$  = 1, if it Rural.

= 0, if it is urban.

$D_{GH}$  = 1, if get govt. help.

= 0, if not get govt. help.

After setting the data in Excel table from the source, it will be analyzed by using STATA. Before any tests have done on the data, summary statistics will be obtained for each variable, which will be listed on Table.

**RESULTS AND DISCUSSION:**

**Regression Analysis**

Here,

Dependent variable:  $Y_s$  (Years of schooling)

Method: Least squares.

Sample: 56

Included observations: 56

**The regression equation may written as follows**

$$Y_s = 10.36339 - .0052793X_L - .0205037X_E - 1.928236FD_A - 1.439707FD_S - 3.075434D_G + (-0.13)(0.89)*** D_R + .3349163X_{AGE} - .1183192X_{NO.OF} SIBLINGS - 4.259128D_{GH} + (2.28)(0.02)** D_G + (-0.30)(0.76)*** D_R + (-2.68)(0.01)* D_{GH}$$

$R^2 = 0.3362$

Where, \*indicates the p values at 1% significance level, \*\*indicates the p values less than 5 % signi-

ficance level, and \*\*\*indicates the p value greater than 5% /10% significance level.

Interpretation

**Sign of the coefficient of variables:**

**Non Dummy:**

The sign of the various non dummy regressors make economic sense. The coefficient of  $X_E$ ,  $X_L$ ,  $X_{no.of\ siblings}$  are negative and  $X_{age}$  is Positive.

**Dummy:**

The differential intercepts coefficients of  $F_{DA}$ ,  $F_{DS}$ ,  $D_G$ ,  $D_R$ , and  $D_{GH}$  are expected to be negative.

**Interpretation of non dummy variables**

-.0052793 is the partial regression coefficient of father's land amount and tells us with the influence of father's education, age, and number of sibling's are held constant, if father's land amount goes up by 1 decimal, then average years of schooling lower by .0052793 year. The estimated slope coefficient for father's land amount is not statistically significant because its p value is quite high and t- value is very low. The relation between fathers land amount and years of schooling is not matter whether it is positive or negative as this variable is statistically insignificant.

-.205037 is the partial regression coefficient of father's education and tells us with the influence of father's land amount, age, and number of sibling's are held constant, if fathers education goes up by 1 year, then average years of schooling lower by .205037 year. The estimated slope coefficient for father's education is not statistically significant because its p value quite high and its t – value is quite low. The relation between father's education and schooling time is not matter whether it is positive or negative as this variable is not statistically significant. 0.3349163 is the partial slope coefficient of age of the students and tells us with the influence of fathers land amount , fathers education, and number of siblings are held constant ,if age of the students goes up by 1 year, then average years of schooling increases by .3349163 year. There is a positive relationship between average years of schooling and students age. The estimated slope coefficient for students' age is statistically significant as its p value is very low and its t- value is high. -.1183192 is the partial slope coefficient of number of sibling's of the students and tells us with the influence of father's land

amount, father's education, students age are held constant, if numbers of siblings goes up by 1 person , then average years of schooling lower by .1183192 year. There is a negative relation between number of siblings and average years of schooling. The estimated slope coefficient for number of siblings is not statistically significant as its p- value is quite high and t- value is quite low.

**Interpretation of dummy variables**

In the above table the coefficient attached to the variable dummy is a differential intercept, showing how much the average years of schooling that receives a dummy value of 1 differs from that of the benchmark. The average years of schooling of the children whose father's occupation is business is a benchmark category (10.36339). The estimated coefficient of the variable when father's occupation is agriculture is (.92-823). That means average years of schooling is lower by (-1.92823) year for actual average years of schooling (10.36339-1.928223)=8.435167 year. The estimated intercept coefficient for occupation agriculture is not statistically significant as its p value is quite high and t- value is quite low. That means the average years of schooling whose father's occupation is agriculture is not statistically different from the average years of schooling whose father's occupation is business. The estimated differential intercept coefficient for variable when fathers occupation is service holder is (-1.43-9707) year. Which means that average years of schooling with service holder occupation coefficient is lower by about (-1.439707) year for actual years of schooling (10.36339-1.439707)=8.923683year.

The estimated intercept coefficient for occupation service holder is not statistically significant as its p value is quite high (47%) and t- value is quite low. That means the average years of schooling whose fathers occupation is service holder is not statistically different from the average years of schooling whose father's occupation is business. The estimated differential intercept coefficient for variable when gender is male is (-3.075434). That means average years of schooling is lower by (-3.075434) year for actual average years of schooling (10.36339-3.075434)=7.287956 year. The estimated intercept coefficient for variable when gender is male is statistically significant as its p value is quite low and significance at (4%) level and t-

value is quite high. That means the average years of schooling for male gender is statistically different from the average years of schooling of female gender. The estimated differential intercept coefficient for students who are rural is (-.131615). That means average years of schooling is lower by (-.131615) year for actual average years schooling  $(10.36339 - .131615) = 10.2292285$  year. The estimated intercept coefficient for variable when students are rural is statistically not significant as its p value is quite high and t- value is quite low. That means the average years of schooling for rural students is not statistically different from the average years of schooling of urban students. The estimated differential intercept coefficient for students who receive government help is (-4.259128). That means average years of schooling is lower by (-4.259128) year for actual average years of schooling  $(10.36339 - 4.259128) = 6.104262$  year. The estimated intercept coefficient for variable when students receive government help is statistically significant as its p value is quite low (significance level 1%) and t- value is quite high. That means the average years of schooling for students who receive the government help are statistically different from the average years of schooling of the students who not receive any government help (Lutfunneher and Islam, 2021; Rahman, 2021).

### **Interpretation of $R^2$**

The  $R^2$  value of about 0.3362 indicates that, the independent variables influence about 33 percent change in the dependent variable.

### **Suggestions for policy implications**

The following recommendations are made on the basis of the findings of the study –

- i) Both in rural and urban areas government help should be given for raising years of schooling.
- ii) Father's education level and family support should also rise for increasing years of schooling.

### **CONCLUSION:**

A conclusion is like the final chord in a song. It makes the listener feel that the piece is complete and well done. The same is true for our audience. Finally we have found that years of schooling of the children of household's, father's land amount, father's education level, and number of sibling's are negatively related with each other and average years of schooling are

positively related with the students age and variable age is statistically significant. We also found that average years of schooling for the male students are different from the female students and average years of schooling for the rural students are not different from the years of schooling for the urban students. We also found that average years of schooling for the students whose fathers occupations are agriculture and service holder are not different from the years of schooling for the students whose fathers occupation is business. At last we see that the average years of schooling for the students who receive government help are different from the students who are not receive the government help.

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### **CONFLICTS OF INTEREST:**

No conflict of interest from the authors end.

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