Maternal Employment, Parental Education Levels and Household’s Income: Differential Impacts on the Schooling of Male and Female Children in Pakistan

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ARTICLE DETAILS

ABSTRACT

The present research empirically investigates the impact of a mother’s employment status, parental education levels, and household income on school enrollment of male and female children (aged 5-15 years) in Pakistan. Child school enrollment is taken as a binary dependent variable, i.e., attending the school or not. A micro data set of 31,294 children from the Pakistan Social and Living Standard Measurement Survey (PSLM) is utilized and analyzed by applying binary logistic regression. Maternal employment, parental education, and household income had discrepancies in their estimated marginal effects on the school enrollment of male child (N = 15266) and female child (N = 14113). A unit increase in maternal employment was responsible for bringing less than one percent decrease in the school enrollment of male child while more than five percent decrease in the school enrollment of female child. Similarly, a unit increase in maternal education (graduation) resulted in respectively 25.32% and 33.55% increase in the school enrollment of male and female child. Whereas a unit increase in paternal education (graduation) resulted in respectively 19.14% and 15.82% increase in the school enrollment of male and female child. A unit increase in a household’s income brought a 2.59% and 5.95% increase in the school enrollment of male and female child. The study signifies maternal education as the most influential and decisive factor in enhancing school enrollments of male child and female child in Pakistan.

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1. Introduction

A larger part of economic growth can be attained by investing in people. Although natural resources or factors are essential for the economy, according to modern economists, human resources are more important for a country’s economic development. The size and growth rate of population, quality of population, and urban and rural distribution of people are included in the human resources of a country. The less developed countries are now investing in people...
to increase human skills, health, and abilities, through job training programmers. If the country's people are healthy, skilled, well-nourished, and educated, they have more human capital. The major difference between developing and developed countries is the progress rate of human capital. Pakistan is a less developed country (LDC) and is facing a low rate of female labor force participation, and ultimately less investment is made in child schooling. The population rate is increasing faster than the rate of human capital accumulation in Pakistan and almost all developing countries. So the expenditure on education in these countries is lower than the increase in population, i.e., 2.5% of GDP over the last five years.

Education and child labor has attracted a growing amount of attention in recent years (Balagopalan 2008). Ray (2002, 2003) examined a concurrent model for child labour and child education, as well as a comparative analysis for Pakistan and Nepal. A greater proportion of male children in Pakistan are enrolled in school, he discovered. Glick (2002) examined the impact of women's employment on the health and education of children's human capital in developing nations. Korupp et al. (2002) examined how the socioeconomic status of the parents affects children's academic performance and found that historical educational trends still hold when both the mother's and father's socioeconomic status are incorporated into the model.

According to the PSLM Survey 2011-12, the schooling status of Pakistani children (5-15 years) is as follows: a total of 68% of children are attending school (of which 74% are male children and 64% are female children) and total 32% children are not attending the school (of which 25% are male children and 38% are female children) whose mothers are employed. The working status of mothers in Pakistan is very poor, i.e., 86.88% of mothers whose children attend school are not employed.

### Table 1: Child Schooling Status in Pakistan

<table>
<thead>
<tr>
<th>Child Schooling Status</th>
<th>Frequency Distribution (%)</th>
<th>Male Child</th>
<th>Female Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Attending School</td>
<td></td>
<td>4,207 (25.90)</td>
<td>5,808 (38.59)</td>
</tr>
<tr>
<td>Attending School</td>
<td></td>
<td>12,036 (74.10)</td>
<td>9,243 (61.41)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16,243</td>
<td>15,051</td>
</tr>
</tbody>
</table>

**Figure 1:** A Comparison of Male (A) and Female (B) Child Schooling Status in Pakistan

(Authors’ own calculations based on the PSLM Data)
Suppose we want to look at the situation of Pakistan regarding net primary school enrollment rates of male and female children, in the world and especially in South Asia. In that case, we are surprised to see the enrollment rates much lower than those in India, Bangladesh, Bhutan, and even those in sub-Saharan African countries (see figure 1).

Figure 2: Net Primary School Enrollment Rates: Pakistan’s Standing in the World and South Asia

There is a conflict between women's employment and girls’ access to education than boys. There is a need to give equal economic opportunities to women, so they will not only contribute to the household earnings and invest more in their children's schooling but also become the major contributor to the nation’s economy.

The significance of assets to children's well-being is greater than that of income. Sherraden et al. (2003) examined the association between mothers' asset ownership and their children's academic performance in three distinct ways. Weiss et al. (2003) investigated the relationship between mother work and parental involvement in education among elementary students from low-income families and discovered that full-time maternal employment and schooling hinder the academic performance of their children. Khan (2003) emphasized the distinctions between education and labour as activities for children.

Hussain and Awan (2007) evaluated the students’ learning process and income differences between men and women in Pakistan. Khan (2007) reviewed the research on women and employment. The primary factors of female labour force participation (in rural and urban Pakistan) were highlighted by Ejaz (2007). In rural Pakistan, Sabot et al. (2008) investigated the rates of return from improving educational quality vs improving educational quantity.
The informal sector is a major source of employment for women in developing countries (Khan and Khan 2009). They examined married women's employment rates in Punjab, Pakistan (rural areas and informal sector). They concluded that expanding employment opportunities and earnings for women in informal employment will reduce household poverty and boost economic growth.

Hoerisch (2011) explored the influence of parental work on children's academic achievement and revealed that the husband's mean hour earnings are significantly weak and positive. In contrast, the mother's hours worked did not affect their children's school achievement. By giving equal employment opportunities to women, women will get empowerment and decision-making power within the household and contribute to the nation’s economy (Isran and Isran 2012). The demand for schooling varies by gender in Pakistan, as explored by Qureshi (2012).

In the case of Pakistan, some studies worked only on child schooling, and the rate of returns from schooling in rural and urban regions (Iqbal, et al., 2021; Sadiq, et al., 2013; Qureshi 2013; Sabot, et al., 2008; Hussain and Awan 2007; Khan 2003; Ray 2002) and some worked only on female labor force participation (Del Rey, et al. 2021; Aldan (2021); Baerlocher et al. 2021; Akram and Khadim 2013; Isran and Isran 2012; Khan and Khan 2009; Khan and Khan 2009; Ejaz 2007; Khan 2007).

To reduce poverty, women's increasing role in decision-making within the household has been emphasized in developmental policy discussions. The impact of one such policy in India, the National Rural Employment Guarantee Scheme, was evaluated by Afridi et al. (2013). (NREGS), on the educational attainment of school going children aged 5-15 years, via women's participation in the labor force. The results showed a significant positive effect of mothers’ share in NREGS on children's educational attainment. Francavilla et al. (2013) discovered an inverse link between a mother's employment and children's educational achievements. Akram and Khadim (2013) focused on women's formal sector employment and discovered a strong link between education and their decision to work. Sadiq et al. (2013) investigated girls' access to education in Pakistan. So, the light of the literature mentioned above, we can formulate the first hypothesis of the current study as follows:

Hypothesis 1: In the patriarchal context of Pakistan, maternal employment is more likely to improve a male child’s school enrollment than a female child.

Parental education and child education are strongly interlinked. Based on particular studies, educated parents are more inclined to invest in their children's schooling [L'Roe, et al. (2022); Bellani and Ortiz-Gervasi (2022); Cha and Park (2021); Pensiero and Schoon (2019); Schoon (2014); Reynolds and Johnson (2011); Schoon (2010); Gratz et al. (2006); Emerson and Souza (2002); Khan (2003)]. While some studies have discovered that a mother's education has a greater impact on their child's education than a father's education, which indicates that less-educated men engage less in their children, keeping them uneducated. [Sathar (1993); Burki and Shahnaz (2001)]. Similarly, family income has also an impact on children's education [Uddin and Sarntisart (2022); Chen, et al. (2022); Cooper and Stewart (2021); Cooper and Stewart (2017); Behrman and Knowles (1999); Behrman and Knowles (1997)]. Here the empirical evidence on the role of parental education as well as a household’s wealth status in the schooling of children enable us to formulate two more hypotheses for this study:

Hypothesis 2: In the gender-discriminating context of Pakistan, paternal education is more likely to improve a male child’s school enrollment than a female child.
Hypothesis 3: Economically, more affluent households are more likely to improve school enrollment of children of both genders compared to poor households.

According to the literature, employed women contribute to household welfare through children's health, schooling, pleasure, and nutrition. It also improves the well-being of a significant number of households. There is theoretical and empirical support for the conceptions. Furthermore, the situation differs by country, based on the formal and informal sectors, female work, technological innovation, the country's economic level, and the social economic role of women in domestic and community.

Women's labour force participation increases their strength and decision-making authority within and beyond the home (Sangwan and Kumar 2021). The majority of women who work outside the home are impoverished and are compelled to do so by their financial circumstances (Alon, et al., 2020). Multiple factors contribute to the low employment and education rates of women and children in less-developed countries. In addition to a lack of self-employment opportunities, cultural norms associated with choosing low-status or low-paying jobs outside the home also contribute to low employment rates among women in LDCs (Isran and Isran 2012). Sen (2001) and Agarwal (2002) concurred that housewives' economic status is improved by work and other income-generating activities.

Women's involvement in the labor force improves their economic status in society and increases the nation's economic efficiency. According to current theories, increasing female workforce participation enhances the female labor force involved in various areas of the economy. It improves the health status of women and decreases educational gaps between male and female education. The growing proportion of women working in agriculture also shows the unpaid work of family workers (Zafar and Mujahid 2012). The objective of the current study is to analyze whether or not a mother’s economic activity increases child schooling. Besides, the study intends to investigate the impact of parental education and a household’s wealth on male and female child schooling in Pakistan.

2. DATA AND METHODOLOGY

Microdata from the PSLM (Pakistan Social and Living Standard Measurement Survey 2011-12) were utilized in this study (Federal Bureau of Statistics). The survey collects data on all family members, including demographic variables such as education, age, relationship status, and geographic factors (rural vs. urban) as well as other characteristics such as well-being, work opportunities, water system, household per capita income, household head, household type, etc. The sample of 31,294 households from that year's survey, which included all dependent and independent variables, was utilized for the current study.

Because most of the variables in this research are binary, non-linear specification is preferable to the linear probability model. The logit model is used to estimate the models of child schooling for males and females separately. In our logit model, the dependent variables are male child schooling and female schooling with several explanatory variables.

Predictors are divided into four groups, i.e., the child level, mother level, family level, and household level, to gauge their impact on child schooling (see the figure below). The child level variables include the age of the child. And a number of siblings (that are not in school). The mother level variables include the mother's working status and education. Family level variables include the father's education and the number of siblings other than the child. And lastly, the household level variables were household size, household head’s gender, household income, and electrification status of the house. The current study's sample is
limited to those aged 5 to 15. The study's conceptual framework is presented below. (see figure 3).

**Figure 3: Conceptual Framework of the Study**

### 2.1 Model Specification

For empirical investigation of the relationship among the core variables or to check the validity of the hypotheses framed, the current study has formulated the following two models:

\[
M_{\text{CH_SCH}} = \alpha_0 + \alpha_1 \text{CH_AGE} + \alpha_2 \text{CH_AGE}^2 + \alpha_3 \text{MEMP} + \alpha_4 \text{MEDU} + \alpha_5 \text{FEDU} + \alpha_6 \text{NO_OF_CH} + \alpha_7 \text{HH_SIZE} + \alpha_8 \text{HHH_GENDER} + \alpha_9 \text{LOG_INC} + \alpha_{10} \text{HH_ELECTRICITY} + \varepsilon \ldots (1)
\]

\[
F_{\text{CH_SCH}} = \beta_0 + \beta_1 \text{CH_AGE} + \beta_2 \text{CH_AGE}^2 + \beta_3 \text{MEMP} + \beta_4 \text{MEDU} + \beta_5 \text{FEDU} + \beta_6 \text{NO_OF_CH} + \beta_7 \text{HH_SIZE} + \beta_8 \text{HHH_GENDER} + \beta_9 \text{LOG_INC} + \beta_{10} \text{HH_ELECTRICITY} + \varepsilon \ldots (2)
\]

The following table summarizes the operational definitions of variables used in the models:

**Table 2: Variables: Type, Name, Definition, and Operationalization**

<table>
<thead>
<tr>
<th>Variable Type</th>
<th>Variable Name</th>
<th>Definition</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
<td>CH_AGE (Child age)</td>
<td>Age of the child in number of years</td>
<td>Continuous variable</td>
</tr>
<tr>
<td></td>
<td>CH_AGE^2 (Square of child age)</td>
<td>Square of the age of the child (in number of years)</td>
<td>Continuous variable</td>
</tr>
</tbody>
</table>
### Independent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEMP</strong> (Maternal employment status)</td>
<td>Working status of the child’s mother</td>
<td>1 = employed, 0 = not employed</td>
</tr>
<tr>
<td><strong>MEDU</strong> (Maternal Educational Level)</td>
<td>Education level of the child’s mother (measured in total number of schooling years)</td>
<td>1 = illiterate, 2 = 10 years, 3 = 14 years, 4 = above 14 years</td>
</tr>
<tr>
<td><strong>FEDU</strong> (Paternal Educational Level)</td>
<td>Education level of the child’s mother (measured in total number of schooling years)</td>
<td>1 = illiterate, 2 = 10 years, 3 = 14 years, 4 = above 14 years</td>
</tr>
<tr>
<td><strong>NO_OF_CH</strong> (Number of children)</td>
<td>Number of children (ages up to 15 years)</td>
<td>Continuous variable</td>
</tr>
<tr>
<td><strong>HH_SIZE</strong> (Household size)</td>
<td>Total number of household members</td>
<td>Continuous variable</td>
</tr>
<tr>
<td><strong>HHH_GENDER</strong> (Household head gender)</td>
<td>Gender of the household’s head</td>
<td>0 = male, 1 = female</td>
</tr>
<tr>
<td><strong>LOG_INC</strong> (Household’s income in log form)</td>
<td>Log of the household’s total income (in Pakistani rupees)</td>
<td>Continuous variable</td>
</tr>
<tr>
<td><strong>HH_ELECTRICITY</strong> (Household electricity)</td>
<td>Electrification status of the house</td>
<td>0 = not electrified, 1 = electrified</td>
</tr>
</tbody>
</table>

### Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M_CH_SCH</strong> (Schooling of male child)</td>
<td>Primary school enrollment of male child (aged 5 to 15 years).</td>
<td>0 = not attending school, 1 = attending the school</td>
</tr>
<tr>
<td><strong>F_CH_SCH</strong> (Schooling of female child)</td>
<td>Primary school enrollment of female child (aged 5 to 15 years).</td>
<td>0 = not attending the school, 1 = attending the school</td>
</tr>
</tbody>
</table>

#### 2.2 Marginal Effects: The Estimation Technique

One method for measuring the effects of independent variables is to calculate their marginal effects. In our regression analysis, we will estimate marginal effects in order to comprehend and evaluate the influence of independent variables on dependent variables. The marginal effect of an independent variable (Xi) in a regression model measures the impact of a change in Xi on the expected change in the dependent variable (Y), particularly when the change in Xi is infinitesimally small. If Xi is continuous and therefore differentiable, the marginal effect of Xi on Y can be determined by calculating the partial derivative of the expression \( E(Y|X) \) with respect to X.
3. RESULTS AND DISCUSSION

3.1 Maternal Employment, Parental Education Levels, and Household’s Income: Implications for Male Child’s Schooling in Pakistan

Binary logistic regression is used to examine the impact of the working status of women on their children’s schooling performance. The regression results are reported separately for male and female child schooling in Tables 4 and 5.

It is observed from table 5 that maternal employment has a negative and insignificant impact on male child schooling. Differences in parental preferences can explain this, i.e., mothers have stronger preferences for the schooling of daughters, and fathers are more inclined to boy’s education [Glick (2002)]. This can be explained as an employed mother having greater bargaining power in the household and ensuring that more resources should be allocated toward a girl’s human capital investment than boys. Hence, mothers have an insignificant and negative impact on male child schooling.

Parental education and child education are strongly intertwined. Educated parents are more willing to invest in their children's education [Emerson and Souza (2002); Khan (2003)]. Results showed a positive impact of mothers’ education on their male children’s school performance. There are three categories of parental education, and results suggest that an extra year of schooling for a lower graduation mother increases the likelihood of a male child attending school by 16.9%, an extra year of schooling for a graduated mother increases the likelihood of a male child attending school by 25.3%. A year of extra education for a highly educated mother increases the likelihood of a male child attending school by 26.1 percent. Similarly, an extra year of metric pass fathers will increase the probability of male children’s schooling by 11.9%, an extra year of education of graduated father will increase the likelihood of male child schooling by 19.1%, and one extra year of education of highly educated fathers will increase male child schooling by 24.6%. At all levels of education, parental education positively impacts child educational attainment at 1% significance. According to the findings, the impact of a mother’s education on a child's education was found to be significantly higher than that of a father’s education [Sathar (1993); Burki and Shahnaz (2001)]. Less educated fathers invest less effort into their children, resulting in uneducated children. These findings agree with previous research by; [Bell and Gerbach (2001); Dessy (2000); Emerson and Souza (2000)].

Table 3: Marginal Effects for Schooling of Male Child

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Marginal Effects</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMP: Maternal Employment</td>
<td>-.0082</td>
<td>0.349</td>
</tr>
<tr>
<td>MEDU_2: Maternal Education Level (matric)</td>
<td>.1695*</td>
<td>0.000</td>
</tr>
<tr>
<td>MEDU_3: Maternal Education Level (graduation)</td>
<td>.2532*</td>
<td>0.000</td>
</tr>
<tr>
<td>MEDU_4: Maternal Education Level (higher)</td>
<td>.2619*</td>
<td>0.000</td>
</tr>
<tr>
<td>FEDU_2: Paternal Education Level (matric)</td>
<td>.1197*</td>
<td>0.000</td>
</tr>
<tr>
<td>FEDU_3: Paternal Education Level (graduation)</td>
<td>.1914*</td>
<td>0.000</td>
</tr>
<tr>
<td>FEDU_4: Paternal Education Level (higher)</td>
<td>.2461*</td>
<td>0.000</td>
</tr>
<tr>
<td>CH_AGE: Child’s age</td>
<td>.2072*</td>
<td>0.000</td>
</tr>
<tr>
<td>CH_AGE2: Child’s age square</td>
<td>-.0102*</td>
<td>0.000</td>
</tr>
<tr>
<td>HH_SIZE: Household size</td>
<td>.0026</td>
<td>0.165</td>
</tr>
</tbody>
</table>
The age of a male child is a significant factor in determining their education opportunities. The likelihood of male children's age is positive on boys' schooling and significant at the 1% level, implying that every year, as age increases, the probability of male children attending school increases by 20.7 percent. However, contrary to belief, child schooling decreases with age [Illahi (2001)]. It indicates that a child's participation in school has been delayed. Children under the age of five are not required to attend school, which explains the positive effect of age on child schooling. The negative value of the age square indicates that the probability of children attending school decreases with age. The association between age and child schooling is inverted U-shaped (∩). As a youngster grows older, their earning potential improves, reducing education.

The number of people living in the same household impacts a child's education. The size of the family unit influences male schooling. It is believed that households with school-aged children have the smallest average family size. The likelihood of children attending school is reduced when the household size expands. In the present study, one additional household member has an insignificant and minor effect on male child schooling.

The number of children under 15 living in the same household has a negative effect on the education of male children. Children living in a household with a large number of children are more likely to be poor than those living in a household with a small number of children. Children from large families are more likely to drop out of school [Sathar, 1993], while those from smaller families are more likely to pursue higher education [Sawada and Lokshin, 2000]. The present study revealed that the number of children in a household has a negative and statistically significant (at the 1% level) effect on the schooling of male children, as each additional member (up to 15 years of age) decreases the likelihood of male children attending school by 1%. Total household income is another significant explanatory variable for child education. The evidence shows that overall household income has a positive and significant (at 1%) impact on child education. Male children are 2.5 percent more likely to attend school when their family's income rises.

The gender of the head of the household has a substantial and positive effect on the education of male children. Male children are 13.0 percent more likely to attend school than female-headed households, according to the evidence. At a 1 percent level, the result is statistically significant. As head of the household, women contribute more to household and child welfare than men [Khan and Khan, 2009]. Women with a greater level of household participation have a higher social status.

A Household’s electricity connection positively and significantly impacts male child schooling. The result shows that one additional household with an electricity connection will increase 12.3% the probability of male children attending school. The result is significant at
the 1% level. This is explained by the fact that electricity represents a household's economic status; as income rises, parents will invest more in human capital, and more male children will attend school.

3.2 Maternal Employment, Parental Education Levels, and Household Income: Implications for Female Child’s Schooling in Pakistan

Table 6 shows that mother employment negatively and significantly impacts female child schooling. One additional mother's employment will decrease 5.2% the probability of female children going to school. In low-income families, a negative impact on girls' schooling may occur because girls as substitutes in the home for working mothers. In girls' education, there is intra-household inequality and a substantial opportunity cost [Glick (2002); Swada and Lokshin (2000)].

Evidence suggests that greater educated parents are more inclined to spend on their children's schooling [Emerson and Souza (2002); Khan (2003)]. Female children's schooling benefits from their mothers' education. At the metric level, one additional year of mother education will increase the 29.2% probability of female children going to school at the graduation level; an extra year of maternal education will increase the 33.5% probability of female children attending the school and at a higher level one additional year of education will increase 30.2% female children's likelihood of attending school. Likewise, there are three levels of schooling for fathers. At metric, an extra year of father education will increase 13.1% the probability of female children attending school. At graduation, one additional year of education will increase 15.8% female children's likelihood of attending school, and at a higher level, one additional year of education will increase 22.1% female children's likelihood of attending school. Results are significant at the 1% level.

A child's age is a significant factor in determining their educational needs. The chance derivative of female child age is found to have a considerable and favorable impact on their schooling, with one additional year of female child age increasing their likelihood of attending school by 20.8 percent. The minus coefficient of the age square indicates that the likelihood of children attending school decreases as they get older. Household size exerts an impact on female children’s schooling. Families with school-aged children have the smallest average number of family members. The likelihood of children enrolled in school is reduced when the household size rises. In this study, the household size has a minor impact on the education of female children. According to Ray (2002), children living in households with a large number of other children are more likely to be impoverished than those living in households with a small number of other children. The current study found that the number of children in a household has a negative and statistically significant (at the 1% level) effect on the likelihood of female children attending school, with the likelihood decreasing by 1.6% for each additional member (up to 15 years of age) in the household.

<p>| Table 4: Marginal Effects for Schooling of Female Child |
|-----------------|-------------|-------------|
| <strong>Explanatory Variables</strong> | <strong>Marginal Effects</strong> | <strong>P-Value</strong> |
| MEMP: Maternal Employment | -.0522* | 0.000 |
| MEDU_2: Maternal Education Level (metric) | .2924* | 0.000 |
| MEDU_3: Maternal Education Level (graduation) | .3355* | 0.000 |
| MEDU_4: Maternal Education Level (higher) | .3029* | 0.000 |
| FEDU_2: Paternal Education Level (metric) | .1310* | 0.000 |</p>
<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Coefficient</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEDU_3: Paternal Education Level (graduation)</td>
<td>.1582</td>
<td>0.000</td>
</tr>
<tr>
<td>FEDU_4: Paternal Education Level (higher)</td>
<td>.2216</td>
<td>0.000</td>
</tr>
<tr>
<td>CH_AGE: Child’s age</td>
<td>.2084</td>
<td>0.000</td>
</tr>
<tr>
<td>CH_AGE2: Child’s age square</td>
<td>-.0110</td>
<td>0.000</td>
</tr>
<tr>
<td>HH_SIZE: Household size</td>
<td>-.0025</td>
<td>0.253</td>
</tr>
<tr>
<td>NO_OF_CH: Total number of children</td>
<td>-.0165</td>
<td>0.000</td>
</tr>
<tr>
<td>LOG_INC: Household’s Income</td>
<td>.0595</td>
<td>0.000</td>
</tr>
<tr>
<td>HHH_GENDER: Gender of the Household’s Head</td>
<td>.1396</td>
<td>0.000</td>
</tr>
<tr>
<td>HH_ELECTRICITY: Household having electricity</td>
<td>.1993</td>
<td>0.000</td>
</tr>
<tr>
<td>Constants</td>
<td>-.0522</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Total number of observations: 14113
Wald Chi-Square (14): 1709.89
Prob. Chi-Square: 0.0000
Pseudo R-Square: 0.2138

* represents the statistical significance of the variable at 1% level of significance

Evidence showed that total household income positively and significantly (at a 1%) effect children's education. The probability of female children attending school increases by 5.9% when household income rises.

The gender of the household head has a positive and substantial impact on the education of female children. Evidence showed that female children have a 13.9% greater likelihood of going to school in addition to female-headed households. At a 1% level, the outcome is significant. In comparison to men, women as head of the house contribute more to household and child welfare [Khan and Khan (2009)]. Women with a higher level of participation in the household have a higher social status.

Household electricity connections also positively and significantly impact female children’s schooling. The result shows that one additional household with an electricity connection will increase the 19.9% probability of female children attending school. The result is significant at the 1% level. This is explained by the fact that electricity represents a household's economic status; as income rises, parents will invest more in human capital, and more male children will attend school.

Based on empirical results of regression analysis for male and female children’s schooling, we concluded that mothers’ employment is negatively related to male and female children’s schooling as they have to look after the home, especially for the girls. The results are the same as the overall model of child schooling, i.e., child age and parental education significantly affect both boys' and girl's schooling. The study shows the insignificant impact of household size on the boys' and girls' schooling. The number of children will have a negative impact on both male and female children's education. While household income and household electricity have a significant positive impact on male and female children going to school in female headed households.

Finally, the study concluded that human capital is an important factor in economic growth and may be the reason for reducing poverty and income inequality. Thus, human capital (child’s schooling) has a significant positive effect on economic growth, supported by empirical studies.
4. Conclusion and Policy Recommendation

The present research empirically examined the impact of a mother’s employment status, parental education levels, and household’s income on school enrollment of male and female children (aged 5-15 years) in Pakistan. The current research is based on micro data of PSLM 2011-12 taken from FBS (Federal Bureau of Statistics). We use male and female child schooling as dependent variables and mother employment, father education, child age, household size, number of children, household income, household head gender, and household electricity as independent variables. We applied the binary logistic regression analysis via maximum likelihood to observe the effects of mothers’ work, parental education levels, and household income on their children’s schooling (aged 5-15 years). Results showed a negative effect of a mother's work on her children's education and insignificant for males' child schooling. On the basis of our results, we concluded that there is a negative association between mother’s employment and female children’s schooling because females may contribute to household work or may contribute to household income if their mother works and they could not attend school.

The study also found that the mother and father’s level of education substantially impacts the schooling of their children (male and female). As the parental level of education increases, it will positively impact their children’s attendance. The age of a child also has a significant positive impact on their schooling they will get a higher level of education with the increase in age. A number of children are negatively related to their schooling, especially for girls' access to education which may bring economic crisis. Girls' education is more responsive than males' education. The increase in the number of children may also cause to decline in the school enrollment of elder children as they have to look after the home and the younger siblings when their mother is outside the home for income generation.

Evidence showed that household income and size greatly affect children's school enrollment. As income rises, parents will be able to afford the expense of their children's education, and as the household size rises, it will positively impact children's schooling. The female headed households showed a positive impact compared to male headed households. And the households having electricity also positively impact on schooling as children will facilitate and find no difficulty in acquiring knowledge on the internet and hence lead to economic growth.

According to our research, education is considered a key role in the development of a country, but a mother’s employment is negatively related to girls ‘schooling. So it’s not surprising as the empirical evidence of previous studies showed that when women go outside for work and income generation, there is less likelihood of their children’s school enrollment. So, there is a need to plan a policy to enhance the contribution of women in income generation and household decision making. This can be achieved by subsidizing childcare facilities and establishing technical educational institutions for mothers in the government. This will lead to economic growth.

Furthermore, our results showed a gender differential in developing countries, as boys are given more importance than girls (especially in rural and poor households). So there is a need to eliminate the gender gap by giving equal importance to both boys and girls in every sector of the economy, which will lead to the economic progress of a country. Government should regulate informal sector income and implement minimum wages. Parental literacy rate contributed toward child schooling. So, the adult literacy rate should be part of Pakistan's
policy for child schooling. The community infrastructure needs to be improved for child schooling in Pakistan.

References


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