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Gender, Poverty and Child Schooling: A Case Study of Punjab, Pakistan

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ABSTRACT

This study investigates the multifaceted factors influencing child schooling in Punjab (Pakistan), with a particular focus on the poverty and gender of the child. The analysis has been done by applying Logistic Regression on the data of the children of age cohort 5-17 obtained through Multiple Indicator Cluster Survey (MICS) 2017-18 conducted in Punjab, Pakistan. Our findings reveal that father's education, mother's education, and area of residence (rural/urban), region of residence, family size, rank of the child in the household, remittances, financial support, gender of the child and poverty are significant determinants of children's schooling. Children of educated parents are more likely to attend school. Similarly, children of the families living in urban areas, belonging to central Punjab and receiving remittances are more likely to attend school. Financial support provided by the government, gender of the child and poverty are also crucial to determine children's schooling. Our findings further reveal that the probability of school attendance is lower for girls than for boys, and this disparity is even more pronounced among girls from low-income households. This finding is further supported by the interaction term included in our methodology, which confirms the compounded disadvantage faced by girls in poor families.

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Introduction

Out of school children is an important issue globally as well as in Pakistan, which is one among those countries where a considerable number of children are out of school. The specters of out of school children and the harrowing grip of dropout rate of children from school cast their formidable shadows across the global landscape, a distressing narrative that reverberates with particular resonance within Pakistan. Recent estimations, a clarion call to our collective conscience, unveiled a staggering revelation: a mammoth cohort of 258 million children, spanning the tender ages of 6 to 17, found themselves bereft of the privilege of education on a global scale (UNESCO, 2019). Amid this international tableau, Pakistan occupies a somber position, emblematic of a nation grappling with the stark reality that a substantial multitude of its own youth is dispossessed of learning. A vast number of children in Pakistan remain outside the formal education system, placing the country among the top two globally for out-of-school youth. The stark data paints a disheartening portrait, as an estimated 22.8 million children, aged 5 to 16, languish beyond the periphery of education's embrace, constituting an alarming 44 percent of the total population in this age group. (UNICEF, 2020). Despite being the most prosperous province of Pakistan, Punjab's educational landscape tells a depressing tale when it comes to children's education. In Punjab13 percent of children of age to go to primary school are out of school. When it comes to middle school, this number goes up to 21 percent. For junior and senior secondary levels, it increases even more to 34 and 47 percent respectively. Throughout all these stages, children from the poorest families tend to be out of school about double the average for all of Punjab. There's a big difference in the number of out of school children between those from the poorest families and the richest families. For primary, middle school, junior secondary and senior secondary levels, this difference is about 27, 38, 54, and 58 percentage points respectively. In rural areas, more children are out of school compared to the average in Punjab across all levels of education. In total, around 1,921,000 children of primary school age and 1,652,000 of middle school age are not attending school. At the secondary level, 1,617,000 children for junior secondary and 2,149,000 for senior secondary are out of school (UNICEF, 2022). The inability to attain even a basic level of universal literacy — let alone complete primary education — reflects a serious oversight that demands urgent attention from education policymakers. There are the numbers of factors that affect schooling of children. Different financial and social supports, demographical and social characteristics of children, their parents and households can affect schooling of children. Even parents in poor households earnestly desire to educate their children, but circumstances compel them to employ child labor to meet basic needs. Often, these households grapple with constraints on credit. Parents want to send their children to school for getting an education but they resort to child labour because they do have to meet subsistence needs (Nawab et al., 2021). In this predicament, Free School Education Programs falter in fulfilling their intended objectives. Previous studies primarily examined individual variables' effects on child schooling, neglecting interactions among gender of child and household's poverty. This study uniquely examines this interaction effect, revealing its heightened significance in influencing child schooling. by using the MICS dataset of wave 6 for children of age cohort 5-17. Additionally, the analysis particularly focuses on how poverty, as measured by the household deprivation score, and the gender of the child independently and interactively determine schooling outcomes. This allows for an in-depth understanding of the compounding disadvantage faced by children from poor households based on their gender. **Literature and Theory**

Education plays an important role in human progress. It enables the citizens to get awareness of their basic rights. It has a close link with the economic and social development of any country. Sustainable economic development is not possible without sustainable investment in human resources.

The investment of parents in the schooling of children will be continued until the additional cost of sending a child to school — including the income lost from not working — matches the additional benefit gained from education. The cost of education is a factor that has an impact on the child's time allocation (work or school) (Cigno and Rosati, 2005; Edmonds, 2008). Free schools Education Programmes reduce child labour a little but, it has no significant effect on the incidence of child labour for girls (C Tang et al., 2019). It is difficult for households to bear short-run economic shocks. These shocks compel parents to involve their children in child labour and drop them out from schools. (Duryea et al., 2007).

Economic theory generally considers child labor as labour supply. It is assumed that, a single household unit, where parents maximize their utility over present consumption, schooling of children, and leisureliness. Parents have an inelastic supply of labour. This supply of labour produces an external income. It is assumed that fertility is fixed as a single child and children's involvement in education has a binary status of two opposite choices i.e. whether a child is engaged in schooling or not. Hence, the household faces the income constraint which is the total household income. This total household income is the sum of adult income and the income from child labour by subtracting the direct cost of children's education. The investment of parents in the schooling of children will be continued until the additional cost of sending a child to school — including the income lost from not working — matches the additional benefit gained from education. (Cigno and Rosati, 2005; Edmonds, 2008). Alfa (2012), Pörtner (2001) and Rosenzweig and Evanson (1977) expressed a basic Model for Household Decision Making. Schultz (1997) further summarized the same Model. According to this Model, the household's maximize utility is defined by a function; the household's maximize utility is a function of (i) the frequency of children, (ii) child education, (iii) leisure time for child, (iv) leasure of parents, and (v) aggregate consumption of goods.

There is a need for financial support from the government to prop up the incomes of poor families. In response to adverse events like parental job loss or reduced agricultural earnings caused by droughts or other natural calamities, impoverished households are often forced to withdraw their children from school and involve them in labor as a coping mechanism. (Edmonds, 2005). Economic shocks like sickness and accidents are the reasons for the reduction in households' income. Negative economic shocks compel parents to push their children into child labour. Poor households depend upon the breadwinner's health. When the breadwinner of the household becomes sick, all members of that household suffer from serious hardships, even to sell assets (Frölich and Landmann, 2015). Social safety net Programmes are helpful to increase school attendance, especially in secondary school (IBRD, 2015).

Social support programs help families meet basic needs but may not boost school enrollment alone. Demographic and social factors also influence dropouts. Effective policies need clear goals and strong implementation.

According to Khan (2001), poverty, lack of educational focus, and harsh teacher attitudes are among the key reasons children leave school. Many students show little interest in attending classes and are unaware of how they are being deprived or exploited. They often do not recognize the value of education and lack clarity about future careers, forming opinions based on hearsay rather than understanding.

Dammert et al. (2017) stress that improving access to credit for poor households is essential, as it can help lower child labour. Similarly, Chaudhry and Khan (2002) identify poverty, large family size, inadequate schooling systems, and parental illiteracy as major contributors to child labour in Dera Ismail Khan. They argue that children are often viewed as economic resources, and parents,

in meeting basic needs, try to maximize their utility. Ahmed (2012) investigates the impact of free education on child labour. The results suggest that schooling is a significant factor in reducing child labour. So schooling is an important factor to reduce child labour as an end onto itself because schooling has positive spillover effects as it reduces child labour events. These results call for the government to continually spending on these Programmes such as the Punjab Education Sector Reform Programme (PESRP), that decrease the expenditure on education and raise the fascination with schooling.

Duraisamy (2000) explores the determinants of child education and labour. The study shows that children of educated parents are more likely to attend school and less likely to work. This influence is particularly strong for mothers, whose education greatly increases school attendance and reduces child labour. Edmonds and Pavcnik (2005) investigate that the improvement in the growth rate of an economy reduces child labour. The progress in the growth rate of a country increases the living standard of households. This process takes a lot of time. Further, this study explains that the development of a country is the best cure for child labour. They discuss some survey evidence on child labour.

This concludes that there are different determinants of children's schooling. Poverty is the main cause of decreasing in the enrolment of children in schools. Other reasons for dropping out the children from school are lack of attention of the child in the study, large family size, and death of parents and behavior of the teachers. Previous studies have almost focused on the individual effects of different variables on child schooling. However, there is a need for a study which can focus on the interaction effect among social characteristics of households. This study fills that gap. The exploitation of gender can be seen in this study. Another type of self-exploitation that can be seen in a household with the eldest child.

Child schooling is influenced by a multitude of economic, demographic, and social factors. Poverty stands out as a key factor influencing education, shaping outcomes through both immediate and underlying channels. Financial constraints frequently drive low-income families to focus on short-term needs, causing education to take a back seat to survival. Edmonds (2005) emphasizes that during adverse economic shocks, such as parental unemployment or loss of income due to natural disasters, poor households are more likely to withdraw children from schools, pushing them into child labor. This compulsion arises from the pressing need to supplement household income, underscoring the cyclical link between poverty and educational deprivation.

Furthermore, poverty disproportionately affects access to quality education across different regions and household dynamics. The disparity in enrollment rates between children from the wealthiest and poorest households is striking, as highlighted by UNICEF (2022), with only 33% of children from the poorest quintile completing primary education compared to 92% from the wealthiest quintile.

Gender adds another dimension to educational inequality, with girls often facing greater barriers to schooling. Traditional gender roles, compounded by resource constraints in impoverished households, frequently place a lower value on girls' education compared to boys'. The opportunity cost of sending girls to school—often perceived as their potential contribution to household chores or income generation—reduces their likelihood of attending school (Afzal et al., 2013). Additionally, societal norms and concerns about girls' safety or cultural appropriateness further limit their access to education, particularly in rural settings.

The interaction between poverty and gender amplifies these challenges, creating a compounded disadvantage for girls from poorer households. As illustrated in the results, the likelihood of schooling decreases more sharply for girls in economically deprived households compared to their male counterparts. This intersectionality suggests that poverty intensifies

the existing gender disparities in education. For instance, the marginal effect of gender on schooling outcomes becomes more pronounced in poorer households, where limited resources necessitate difficult choices that often disadvantage girls.

This interaction aligns with the concept of intersectionality, where overlapping social categorizations such as economic status and gender produce cumulative disadvantages. Poorer households' constrained ability to invest in education disproportionately affects girls, whose educational opportunities are often deprioritized. As demonstrated by BARÓN and Bend (2023), girls in poor households are 22 percentage points less likely to attend school compared to boys in similar circumstances, whereas this gap narrows significantly in wealthier households.

These insights emphasize the importance of targeted interventions that address both poverty alleviation and gender-specific barriers to education. Social safety nets, such as conditional cash transfers, have been shown to effectively increase school attendance, particularly among marginalized groups. However, ensuring equity in educational outcomes requires integrating gender-sensitive approaches into these programs. Policies aimed at reducing the opportunity cost of schooling for girls, coupled with community-level awareness campaigns to challenge traditional gender norms, could help bridge the educational gap. Addressing these intersectional disadvantages is essential for fostering inclusive educational growth and achieving sustainable development goals (SDG 4).

Methodology

In order to study the effects of gender of child and household's poverty on child schooling, the functional form of the model used in our study is as below:

Schooling= f (Mother's Education, Father's Education, Poverty, Gender, Area, Region, Birth Order, Financial Support, Remittances, Family Size). All variables used in the model are binary variables. Schooling is predicted variable, where 1 indicates that the child is attending school, while 0 otherwise. In the MICS dataset, maternal education is classified into four categories: no education, primary, secondary, and higher education. For analytical purposes, this has been converted into a binary variable, with "less than secondary education" assigned a code of 0 and "at least secondary education" assigned a code as 1.

Father's Education is also used as binary variable, coded as 0 in case of less than secondary and 1 in case of at least secondary education. Poverty is our next variable which has been constructed by following Alkire and Foster Methodology (Alkire and Foster, 2011). This methodology uses a multidimensional approach for poverty measurement. The value of the deprivation score ranges between 0 and 1 where higher value implies higher deprivation (detail of the measurement of scores is available in appendix). A household with deprivation score ≥ 0.333 has been termed as poor whereas a household with a deprivation score < 0.333 is considered as non-poor. Gender of the child is specified as female/male whereas the variable of Area is defined as rural/urban. The variable of Region is constructed as dummy variable by labeling districts in the central region as 1 and all other districts as 0. Birth Order has been used by distinguishing the eldest child (coded as 1) from the other children (coded as 0). MEDU represents mothers' education as reported in the MICS dataset, categorized into four levels: no education, primary, secondary, and higher education. For analysis, it has been transformed into a binary variable, where "less than secondary education" is coded as 0 and "at least secondary education" is coded as 1. Similarly, FEDU refers to fathers' education, which is also classified into four categories: no education, primary, secondary, and higher education. This has been converted into a binary variable, assigning a value of 1 for "at least secondary education" and 0 for otherwise.

GC= Gender of children used as a binary variable; 1 for females, 0 for males. CP= Central Punjab; divisions of Punjab has been divided into nine distinct categories, namely: Lahore, Faisalabad, Gujranwala, Sahiwal, Bahawalpur, D. G Khan, Multan, Rawalpindi and Sargodha divisions in MICS dataset. This data has been transformed into a binary variable, representing two distinct classifications as follows:1 in the case of Lahore, Faisalabad, Gujranwala, Sahiwal and 0 for otherwise. RP=Regions of Punjab Province this information is coded through binary variable; 0 for Urban, 1 for Rural. RC=Rank of the children this information in the MICS dataset, this variable originally identifies a child's position within the household by assigning one of nine ranks—ranging from 1st to 8th. For analytical purposes, it was later recoded into a binary format, grouping the data into two broader categories. 1 in the case of the Eldest Child in household and 0 for otherwise. FS=Received Financial Support through any Programme, four specific categories have been identified for this information. Financial Support through Watan card, Bynazir income support programme, Khdmat card and Bait ul mall in MICS dataset. This information was converted into a binary variable, reflecting two distinct classifications, namely:1 in the case of received Financial Support through any programme and 0 for not received Financial Support through any programme. Remittances=Received Remittances which are measured through a binary variable; 0 for not received remittances, 1 for received remittances. FS=Size of Family is a continue variable. It has different continue values in MICS dataset. This information has been used as a binary variable divided into two classified i.e. 0 for Small Size of Family ≤ 6 members 1 for otherwise (Large Size of Family) (by following the criteria given by MICS, 2017-18). HDS* GC = Interaction term of Gender and household deprivation score. The interaction term is used to examine how the household deprivation score influences the relationship between a child's gender and their likelihood of attending school.

Estimating Deprivation Scores

We calculated the Deprivation Score. This classifies multiple deprivations in education, health and standard of living, at the individual level. According to the deprivation of each person's household, every person is assigned a deprivation score in each of the 10 component indicators. For this, 100 percent is the maximum score; through each dimension is equally weighted (thus, 33.3 percent is the maximum score in each dimension). According to this methodology, there are three dimensions: education, health and standard of living. There are two indicators of education and health dimensions each, thus each component has worth 1/6 (or 16.7 percent). The dimension of standard of living has six indicators, thus each component has worth 1/18 (or 5.6 percent) (UNDP, 2020).

To make distinguish between poor and rich households, we need a deprivation score(s) of each household. For the calculation of the deprivation score of each household, we identify the deprived and non-deprived households or individuals according to the available facilities at an individual level or household level. For identifying the multi-dimensionally poor, we sum the deprivation scores for each household to find the household deprivation which is denoted by (s). We use the weighted indicators (a cut-off of 33.3 percent or one-third of the weighted indicators) to make a distinction between the poor and the non-poor. If deprivation scores ≥ 0.333 or 33.3 percent, that household is multi-dimensionally poor. If deprivation scores < 0.333 or 33.3 present that household (and everyone in it) is non-poor or rich.

We calculated the deprivation score of each household by identifying the deprived and non-deprived households or individuals according to the available facilities at an individual level or

household level. After that, we assigned the weights. In this way, we got a deprivation score(s) for each household (HDR, 2019). We created the household's statuses according to deprivation scores. We created binary categorical independent variable with the name of the deprivation score (poor/rich) of households. We observed the impact of these statuses on children's schooling by using the Logistic Regression Model.

Statistical Analysis

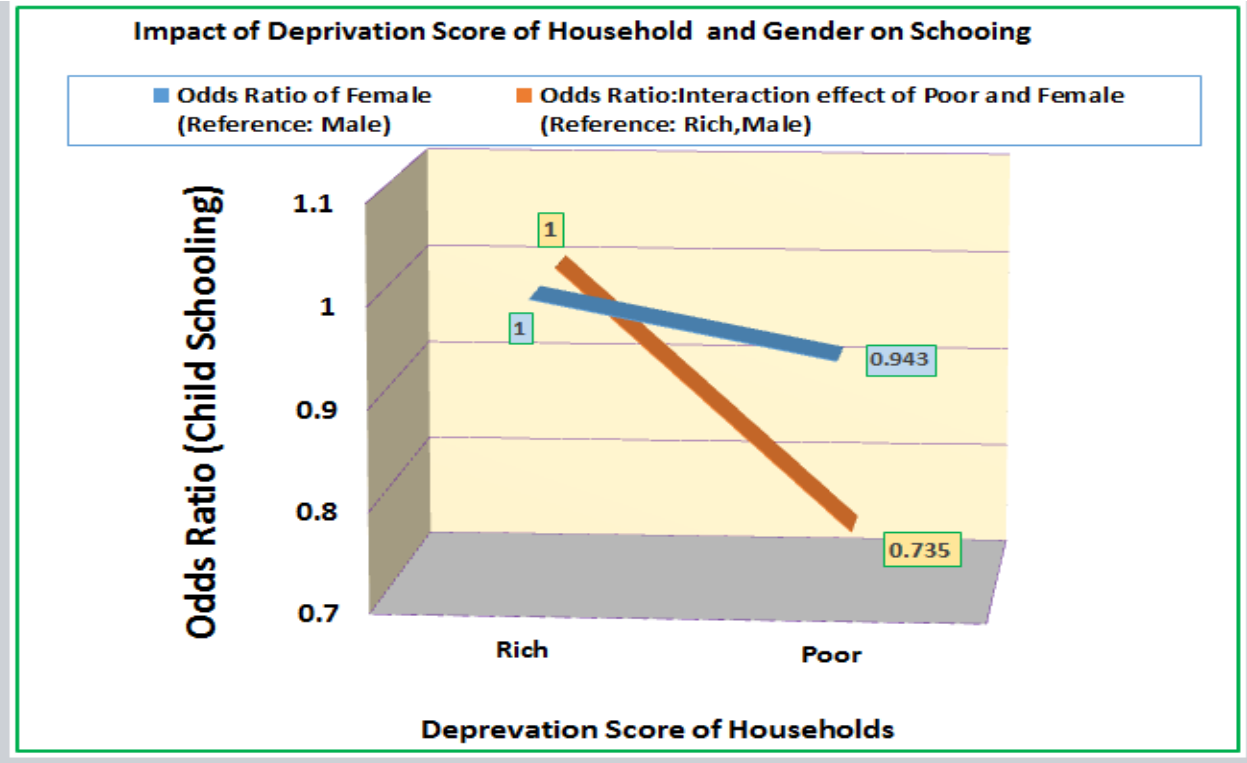
To examine the socio-economic factors influencing child schooling, a multivariable logistic regression model was applied. Multivariable logistic regression has been run on independent variables i.e. household deprivation score, Mothers' education, Fathers' education, Gender of children, Central Punjab; divisions' of Punjab, regions of Punjab province, Rank of the children, received financial support through any Programme, remittances, size of family, interaction term of gender and household deprivation score. Particular attention has been given to poverty, represented by the household deprivation score, and the gender of the child, as well as their interaction, to explore how these factors influence schooling outcomes.

We present the resulting estimated Odds Ratios (OR), and the Average Marginal Effects (AME) of each significant term variable. For this analysis, SPSS software version 25 was utilized. To examine the interaction effects of the household deprivation score, an interaction term combining the child's gender and the household deprivation score was included. Interaction terms come into play when a third factor—called a moderating or interactive variable—affects how an independent variable influences a dependent variable. This additional variable can either intensify or reduce the strength of the original relationship between the independent and dependent variables. Since our focus is on exploring the moderating role of the household deprivation score, we have used interaction term of gender of child and household deprivation score.

Table 1. *Empirical Results of Binary Logistic Regression. Dependent Variable: Child Schooling.*

Independent Variables	Odds Ratio (P-value)	Odds Ratio (P-value)	Marginal Effects
Region: Urban	Ref.	Ref.	Ref.
Rural	.907 (.000)	.906 (.000)	-0.014 (.000)
South and West Punjab (Bahawalpur, D. G Khan, Multan, Rawalpindi and Sargodha divisions	Ref.	Ref.	Ref.
Central Punjab (Lahore, Faisalabad, Gujranwala and ,Sahiwal divisions)	1.246 (.000)	1.244 (.000)	0.030 (.000)
Small Family Size	Ref.	Ref.	Ref.
Large Family Size	1.784 (.000)	1.787 (.000)	0.080 (.000)
Mother's Education ;None/Less than Secondary	Ref.	Ref.	Ref.
At least Secondary and above	1.246 (.000)	1.248 (.000)	0.031 (.000)
Father's Education; None/Less than Secondary	Ref.	Ref.	Ref.
At least Secondary and above	1.821 (.000)	1.820 (.000)	0.083 (.000)
Rank of the children (Younger Children in Household)	Ref.	Ref.	Ref.
The Eldest Child in Household	.553 (.000)	.553 (.000)	-0.082 (.000)
Received Remittances (Households receive remittances from outside the country)	1.184 (.002)	1.185 (.002)	0.023 (.002)
Received Financial Support through any Programme	1.114 (.000)	1.115 (.000)	0.015 (.000)
Gender of Child: Boys	Ref.	Ref.	Ref.
Girls	.943 (.029)	.885 (.000)	-0.022 (.000)
Rich (Deprivation Score Household)	Ref.	Ref.	Ref.
Poor (Deprivation Score Household)	.549 (.000)	.471 (.000)	-0.104 (.000)
Rich (Deprivation Score of Household) * Gender of Child: Boys	Ref.		
Poor (Deprivation Score of Household) * Girls	.735 (.000)		

Fig. 1. *Graphical Presentation of Main and Interaction Effects of Deprivation Score and Child Gender on Child Schooling with Odds Ratio*



Results and Discussion

The results derived from the logistic regression analysis (Table 1) demonstrate that deprivation score (poor) (OR = 0.549), gender of children (female) (OR = 0.943), regions of Punjab province (rural) (OR = 0.907), rank of the children (the eldest child) (OR = 0.553) are found to have a statistically significant negative impact on child schooling. Deprivation score (poor) (OR = 0.549). It shows that the likelihood of going to school is lower in the case of children who are living in poorer or deprived households with not access in education, health and standard of living. Similarly, we found that the average marginal effect of being exist in poorer families on child schooling is -0.104. This means that the probability of going to school is on average about 10 percentage points lower for the children who live in poorer families than for those who exist in richer families. Yet, paradoxically, the poor-class segment is enrolling fewer of their children in schools, while the upper-classes segments are prioritizing education for a greater number of their offspring. This raises the question of what measures the government can implement to support underprivileged children and underscores the injustice of holding a child at fault for being born into poverty. This data also shows that the disparity in completion rates between children from the wealthiest and the poorest segments remains high at all levels of the education system. In primary education, 92 percent of children from the wealthiest quintile finish their schooling, while only 33 percent from the poorest quintile do so. Similarly, while 72 percent of children from the richest quintile complete junior secondary education, only 10 percent of children from the poorest quintile achieve the same. Additionally, there is a slightly higher percentage of girls among children who do not complete primary education. (UNICEF, 2022). Gender of children (female) (OR = 0.943). It illustrates that the girls have lower likelihood of attending school compered to boys. The average marginal effect of girls (gender) is - 0.022. This

means that the probability of going to school is on average about 2 percentage points lower for girls than boys. The majority of children not attending school are girls, and this pattern remains consistent from primary to junior secondary levels. In all education levels, over 70 percent of out-of-school children reside in rural areas. Children from the poorest quintile constitute 60 percent of those out of school at the primary level, 52 percent at the middle school level, 41 percent at the junior secondary level, and 30 percent at the senior secondary level (UNICEF, 2022) . Generally, the pronounced difference in rural areas is so strong that it negates the parents' commitment to female education at the middle and high school levels observed in urban areas. Consequently, there is an overall gender disparity in Punjab. (Afzal & Qadir, 2022). Regions of Punjab Province (rural) (OR = 0.907). It shows that the likelihood of children going to school for rural areas is also low. It indicates that children of urban areas have been facilitated with educational opportunities. Similarly, we found that the average marginal effect of being exist in rural areas on child schooling is - 0.014. This means that the probability of going to school is on average about one percentage points lower for the children who are living in rural areas than for those children who exist in urban areas. The most vulnerable group consists of girls living in rural areas. (BARÓN, J.D and Bend, S, 2023). Rank of the children (the eldest child) (OR = 0.553), the eldest child has a lower likelihood for attending school as compared to younger children in a household. Similarly, we establish that the average marginal effect of the eldest child in household on child schooling is - 0.082. This means that the probability of going to school is on average about 8 percentage points lower for the children who are the eldest in household than for younger siblings in households. This dynamic becomes especially evident when the eldest child in the family starts earning income. The financial contributions of elder children may be prioritized over their education, resulting in a lower likelihood of the eldest child to attend school. The increase in family income over time, the likelihood that older siblings might be motivated to leave school early to support younger family members. It may be the potential advantage for younger siblings due to parental child-raising experience. Ultimately, time invested by parents and older siblings may positively impact younger children. (Alison L et al. (2009)). The findings from the logistic regression analysis (Table 1) reveal that the mothers' education (OR = 1.246), fathers' education (OR = 1.821) are positively and significantly related to child schooling. As a mother advances in her education, she becomes better equipped to provide academic support to her children. She can offer valuable guidance, homework assistance, and a deeper understanding of complex subjects. A mother's educational journey serves as a powerful role model for her children. It demonstrates the value of continuous learning and can inspire them to set and achieve their educational goals. A mother with higher education is likely to be more informed about educational opportunities and career paths. The higher levels of father's education provide better education and less behavioural and physical health problems. So, higher education of a father gives more chances to his children to get education. Different studies reveal that parents with education tend to hold supportive attitudes toward their children's studies. (Aqsa Shoukat et al. (2013). Variable Central divisions of Punjab (OR = 1.246) is significantly and positively related to child schooling. It shows that children have a higher likelihood of going to school in division Faisalabad, Lahore, Gujaranwala, Sahiwal as compared to other divisions of Punjab. These results are pointing out the inequality. It manifests the situation of inequality in human development and inequality across districts of Punjab. Three districts, DG Khan, Muzaffargarh, and Rajanpur had very low rates of completion of junior secondary levels. It is 20 present. The greatest concentration of out-of-school children at the primary stage is found in Rahim Yar Khan, and at the middle school level, RY Khan is followed by Muzaffargarh. At the junior secondary level,

Muzaffargarh, Lahore, RY Khan, and Multan have the highest proportion of out-of-school children (UNICEF ,2017-18). Different researches indicate that children in Southern Punjab encounter distinct obstacles in pursuing education. One of the most challenging issues for these children is the considerable distance between school and home. Previous research studies also confirm that the extended distance between school and home poses significant challenges to children's education (Zulfiqar at al., 2019) These results fulfil the statement that different groups in Pakistan live completely different lives (UNDP, 2020). Variable received financial supports through any Programme (OR = 1.114) shows a significant and positive relationship with child schooling. Similarly, we found that the average marginal effect received financial support by household on child schooling is 0.015. This means that the probability of going to school is on average about 2 percentage points higher for the children who are living in households receiving financial supports than for not receiving financial support. It reveals that the amount of financial support provided by the government encourages the children to attend school. These findings underscore the positive impact of government financial support programs on educational outcomes. As such, it highlights the importance of continued investment in such initiatives to increase school attendance among vulnerable populations. The significant impact of remittances (OR = 1.184) on child schooling shows that remittances may help to reduce the burden of poverty. The odds ratio of the variable received remittances for schooling is 1.184. It shows that the likelihood of schooling is 18.4 percent higher among those children who are receiving remittances as compared to the children who are not receiving remittances (reference category). Different researches also indicate that remittances exert a notable and positive influence on school enrolment of children. Children in households receiving remittances are 34 percent more likely to enroll in school than those in households without remittances. A gender-specific analysis reveals a more pronounced impact on girls; the effect of remittances on girls' school enrollment is 13 percentage points higher compared to boys. (Khan and Khan, 2016). The results of this study show that large family size (OR = 1.784) has a positive impact on children's schooling. In larger families, children may be influenced by their siblings who attend school, creating a positive peer influence that encourages education. Large families may pool resources and support each other's educational endeavours, ensuring that all children have access to schooling. It's important to note that the reasons can vary widely depending on the specific cultural, economic, and social context of the family and the region. The collection of evidence implies that the connection between family size and educational achievement likely depends on methods of production, and access to education. These factors influence how much impact a family has on a child's schooling (Desai 1995; Cassen, R 1994). In specific scenarios, the idea of choosing between quality and quantity in terms of family size may not apply, and the wish for well-educated children might not always lead parents to opt for smaller families (Gomes 1984; Mueller 1984). Contrary to common belief, findings from Botswana and Kenya indicate an unexpected trend: larger family size is linked to higher levels of child schooling (Gomes 1984). This is primarily due to the fact that many families residing in rural areas lack access to schools or the necessary resources, regardless of their family size. However, within the same country, studies reveal divergent trends among different groups. For instance, among Israeli Jews, having a larger family is associated with lower educational achievement. Yet, among Israeli Muslims, who face comparatively fewer socioeconomic advantages, reside in less urbanized areas, have extensive family networks, and experience higher fertility rates, the size of the family doesn't seem to impact educational attainment (Shavit and Pierce 1991; Angrist et al. 2006). Our data shows that even if the family size is larger, schooling is increasing. An increase in family size leads to an increase in schooling, indicating a positive

relationship. There are two main reasons for this: rural areas and access to schools. In rural areas, regardless of whether the family size is small or large, parents might struggle to send their children to school. The major reason for this is the lack of access to schools. If children don't have the facilities to attend school, it won't make a difference whether the family size is small or large.

The findings further indicate that the interaction effects between girls (gender) and the household deprivation score (OR = 0.735) are significantly associated with a decline in child schooling. To better explain these interaction effects, a slope analysis has been conducted, examining how the deprivation level of a household (poverty) influences the link between girls (gender) and child schooling (Fig. 1). The steepness of the curve highlights that the association between gender and schooling is more negatively sloped for economically disadvantaged households than for wealthier ones. This suggests that lower household economic status intensifies the disadvantage girls face in accessing education. Conversely, in financially stable households, the gender-based disparity in schooling is less severe. These patterns underscore the importance of both household economic condition and child gender in shaping educational outcomes. As economic resources within a household influence school access, policies aimed at equitable education provision may play a key role in bridging these gaps and promoting inclusive education across different socio-economic groups. Education of girls strengthens economies and lessens inequality. It also builds stronger, more resilient communities that enable everyone, regardless of gender, to reach their full potential. Girls' education is seen as a wise investment, and Pakistan is dedicated to ensuring that both girls and boys have access to quality education (SDG 4). Access to quality education in Pakistan remains difficult, most notably affecting girls and children from low-income or marginalized backgrounds. The government needs to act by enhancing access to education, like constructing additional schools, arranging transportation, and giving financial aid to families who require it. Girls face considerable educational disadvantage in poor households, where their school attendance rates lag behind boys by 22 percentage points. With wealthy households, this gender gap becomes narrower. This reflects that families identify the cost of education as the primary obstacle to enrolling girls in primary school. (BARÓN, J.D and Bend, S, 2023).

Discussion and Policy Implications

In Pakistan, making quality education universally accessible continues to pose serious difficulties, with girls and children from socially and economically excluded groups facing the most severe obstacles. To address this issue, the government should implement measures such as constructing additional schools, providing transportation facilities, and offering financial support to families in need. Findings indicate that the interaction between gender (girls) and household deprivation score has a significant negative impact on child schooling. The steep decline in the association between girls and schooling is more pronounced in poorer households compared to wealthier ones. These findings imply that household's wealth status reduces the strength of the association between girls and child schooling. As household's wealth status declines, the impact of being a girl on school attendance becomes more significant. There are solutions to address these challenges. Additionally, ensuring school safety measures, such as constructing boundary walls around schools, contributes to creating a secure environment for students. There are measures being implemented in Pakistan to address these challenges.

One initiative is the extension of the conditional cash transfer program to all districts across the country, along with successful stipend programs specifically for girls. To narrow these educational gaps, expanding and reinforcing financial assistance to families, considering both gender and rural locations, could be beneficial. However, these financial incentives will be effective only if

there are sufficient schools available. Unfortunately, in many rural parts of Pakistan, there's a shortage of middle schools, leaving a considerable number of middle school-aged students without educational opportunities after completing primary school. For instance, rural Pakistan has close to 130,000 primary schools but just around 33,000 middle schools, resulting in limited educational opportunities for students once they complete primary level. (BARÓN, J.D and Bend, S, 2023). To address the high dropout rates before completing primary and lower secondary education, the government should focus on improving access to quality education in rural and underserved areas. Building more schools and ensuring adequate infrastructure can help reduce barriers to education. Strategies should be designed to address the unique challenges faced by each gender in accessing education. It is recommended that primary and secondary education should be compulsory and provided free of cost by the government. Implement targeted financial support programs for families, especially those living in poverty, to incentivize sending children to school. These programs can be conditional, such as providing cash transfers or subsidies in exchange for regular school attendance.

Financial support through any programs seems to make more effective in increasing school attendance. Policy makers of other financial support programs should assess the effectiveness of these programs delivery mechanisms, including outreach efforts, awareness campaigns, and community engagement. This evaluation can help identify best practices that can be replicated in other financial support programs. Consequently, it has been stated that higher wealth status increases schooling. Advocate for an increase in the amount of financial support provided to families in the poorest wealth quintiles. Adequate financial assistance can help cover basic needs but also other educational expenses, such as transportation. Recognize the importance of targeted financial support for the poorest wealth quintiles to bridge the educational gap. Develop programs that specifically cater to the needs of these vulnerable households, offering them incentives to send their children to school. It also shows that the amount of financial supports is very low. It needs to be increased by the government. This is the essence of a good governess to take into account the visionary needs to establish any policy for the poor. This study shows that the education levels of parents have a significant effect on a child's schooling. Results indicate that remittances have a statistically significant association with child schooling. Migrants or foreign worker should diversify their sources of income. This study shows that remittances are one of the sources of income for people in low-income and increase schooling. Authorities should emphasize the importance of parental engagement in children's education, especially mothers, by providing resources and guidance to support their involvement in their child's schooling. Comprehensive support mechanisms should be established to encourage fathers' active involvement in their children's education, thereby promoting a positive and supportive learning atmosphere within the home. Design educational interventions that consider the rank of children within households, tailoring support to ensure equitable access to schooling for all children, regardless of the rank of the child. Now we can conclude our research by saying that books in the hands of women is a development: when girls embrace books or attend school, they embrace empowerment and growth—a simple act with profound impact. The pages they turn become a journey toward personal development and knowledge, unlocking endless possibilities.

The findings of this study provide significant insights into the determinants of child schooling, particularly the roles of poverty, gender, and their interaction. These insights suggest targeted interventions and policy recommendations for both government and non-governmental

organizations to address the barriers to education and promote equitable access to schooling.

Expansion of Conditional Cash Transfers (CCTs): Programs like the Benazir Income Support Programme (BISP) and Punjab Education Sector Reform Programme (PESRP) should be expanded. Conditional transfers tied to school attendance can incentivize families, especially in poorer households, to prioritize education over child labor.

Subsidizing direct costs of schooling (e.g., uniforms, books, and transportation) can alleviate the financial burden on poor families.

Building More Girls' Schools: Especially in rural and underdeveloped areas, establishing separate schools for girls can mitigate cultural and safety concerns that deter female education.

Female Teacher Recruitment: Employing more female teachers in rural schools may encourage higher enrolment and retention of girls in education. Targeted scholarships for girls in poor households can offset opportunity costs and motivate families to invest in their daughters' education. Governments should prioritize the construction of schools in rural and remote areas where long distances deter enrolment. Implementing affordable or free school transport can ensure that children, especially girls, can access educational facilities safely. Social safety net programs should be expanded to protect families from economic shocks like job loss or illness of the main

Launch mass campaigns emphasizing the long-term benefits of education, particularly for girls. Highlighting success stories of educated women from similar backgrounds can challenge societal norms that undervalue female education. NGOs can partner with government agencies to expand educational access in underserved areas. Joint initiatives can focus on building schools, offering teacher training, and providing learning materials. NGOs should engage communities at the grassroots level to raise awareness about the value of education for both boys and girls. These initiatives can address cultural barriers and promote a supportive environment for schooling.

Develop targeted programs for marginalized groups, such as girls in rural areas or children from extremely poor households, to provide additional support like mentorship programs, remedial classes, or nutritional support. NGOs can act as advocates for policy reforms, lobbying for gender-sensitive budgeting in education and prioritization of rural educational infrastructure. Education initiatives should be integrated with other development sectors such as health and nutrition. Programs that provide mid-day meals, healthcare, and hygiene facilities in schools can improve attendance and learning outcomes, particularly for girls.

Partnerships between governments, NGOs, and private sectors can create skill development programs for older children to replace child labor with sustainable, education-friendly alternatives. Deploy low-cost digital learning solutions in underserved areas. These can complement traditional schooling methods, enabling children in remote areas to access quality education. Governments and NGOs should invest in data collection and analysis to track the progress of educational programs. Metrics such as enrolment rates, dropout rates, and gender parity indexes should be regularly monitored. Programs should incorporate feedback mechanisms to adapt to the evolving needs of communities. For instance, pilot studies can be conducted before scaling up initiatives to ensure effectiveness.

Conclusion

The study underscores the need for a dual focus on poverty alleviation and gender-sensitive strategies to improve educational outcomes. Addressing structural inequalities through robust government policies, coupled with grassroots-level interventions by NGOs, can create a more equitable education system. An inclusive approach that prioritizes the needs of marginalized children, particularly girls in poor and rural households, is vital to breaking the cycle of poverty and fostering sustainable development.

Author Contributions

Uzma Abbas: Conceptualization (equal), Methodology (equal), Quantitative Analysis, Writing – original draft, Writing –review & editing

Dr. Zahid Pervaiz: Methodology (equal), Quantitative Analysis, Writing –review& editing

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Data Availability Statement

The dataset analyzed during the current study is available from the UNICEF MICS database and the Pakistan Bureau of Statistics (PBS). Access may require free registration. Data supporting the findings of this study are publicly available from the Multiple Indicator Cluster Surveys (MICS) 2017–18, Wave 6, for Punjab Province, Pakistan, conducted by UNICEF, accessible at https://mics.unicef.org/ 2017–18, Wave 6, for Punjab Province, Pakistan, conducted by UNICEF, accessible at https://mics.unicef.org/

References

Afzal, M., Butt, A. R., Akbar, R. A., & Roshi, S. (2013). Gender disparity in Pakistan: a case of middle and secondary education in Punjab. *Journal of Research and Reflections in Education, 7(2), 113-124.*

Afzal, M., & Qadir, F. (2022). Falling Standard of education in Pakistan: Who will tie the bell?. *EduLine: Journal of Education and Learning Innovation*, *2*(2), 151-159.

Ahmad, A. (2012). Poverty, Education and Child Labour in Aligarh City-India. *Studies on Home and Community Science*, 6(3), 165-172.

Akerlof, G.A. (1982). Labor contracts as partial gift exchange. *The quarterly journal of economics*, 97(4), 543-569.

Ahmed, H. (2012). The Impact of Public School Enrolment on Child Labor in Punjab, Pakistan. *Lahore Journal of Economics*, 17(2), 1–34.

Alfa, A. B. (2012). The influence household decision on child labour activities: analysis from rural areas of Niger state, Nigeria. *International Journal of Advanced Research in Management and Social Sciences*, *1*(3), 32-49.

Andrews, C., Hsiao, A., & Ralston, L. (2018). Social safety nets promote poverty reduction, increase resilience, and expand opportunities. *Realizing the Full Potential of Social Safety Nets in Africa, Washington, DC*: World Bank, 87-138.

Angrist JD, Lavy V, Schlosser A.2006"Multiple Experiments for the Causal Link Between the Quantity and Quality of Children."Working Paper 06-26. Department of Economics, Massachusetts Institute of Technology. Available online at http://ssrn.com/abstract=931948

Alkire, S. and Foster, J. (2011). Understandings and misunderstandings of multidimensional poverty measurement. *The Journal of Economic Inequality*, 9(2), 289-314.

Cigno, A., & Rosati, F. C. (2005). *The economics of child labour*. Oxford University Press.

Duryea, S., Lam, D., & Levison, D. (2007). Effects of economic shocks on children's employment and schooling in Brazil. *Journal of development economics*, *84*(1), 188-214.

Edmonds, E. V. (2005). Does child labor decline with improving economic status?. *Journal of Human Resources*, *40*(1), 77-99.

Edmonds, E. V., & Pavcnik, N. (2005). The effect of trade liberalization on child labor. *Journal of international Economics*, *65*(2), 401-419.

Landmann, A., & Frölich, M. (2015). Can health-insurance help prevent child labor? An impact evaluation from Pakistan. *Journal of health economics*, *39*, 51-59.

Nawab, T., Aktaş, B. N., Ahmad, T. I., & Ibraheem, R. (2021). The Role of Household Wealth in Combining Child School and Child Labor: Evidence from MICS Balochistan (Pakistan). *Journal Home Page*, *3*(2), 188-199.

Tang, C., Zhao, L., & Zhao, Z. (2019). Free education helps combat child labor? The effect of a free compulsory education reform in rural China. IZA Discussion Paper No. 12374, Available at SSRN: https://ssrn.com/abstract=3401142

UNICEF (2022). Giving every child the right to education. Available at https://www.unicef.org/pakistan/education

UNESCO (2019). 258 million children ages 6-17 are not in school. Available at https://on.unesco.org/2k8kM4B

Zulfiqar, A., Syed, F. R., & Latif, F. F. (2019). Developing a student well-being model for schools in Pakistan. *Improving Schools*, *22*(1), 86-108.