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The Simultaneous Decision-Making Process Regarding Schooling and Child Labour in Urban Households of the Zhob and Sherani Districts in Balochistan, Pakistan

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ABSTRACT

This research examines the simultaneous decision-making processes regarding education and child labour within urban households in the districts of Zhob and Sherani in Baluchistan. A questionnaire was employed to collect primary data to achieve the study's objectives. The analysis was conducted using the Sequential Probit Model. The specific aims of this study include investigating the supply-side factors influencing child labour in urban settings, particularly the relationship between parental decisions (to enrol their children in "school only," "a combination of school and work," "work only," or "neither school nor work") and four categories of socio-economic variables: child characteristics (including birth order, gender, age, and education of the child), head of household characteristics (such as gender, age, education, employment status, and income of the head of the household), parental characteristics (including the education, income, and employment status of both the father and mother), and household characteristics (comprising asset ownership, per capita household expenditure, family size, and the composition of the household, specifically the number of children under five years and those aged five to fifteen). The urban child population stands at 11.7 million, representing 28 % of the total child population, with urban child labour accounting for one-eighth of rural child labour. The findings indicate that child labour in these two districts is primarily driven by low income levels and poverty. Various factors significantly influence households' decisions regarding the allocation of children's time. A key finding of the study indicates that parents tend to favour their sons' education, highlighting the presence of gender bias within the educational system. If the effect of diminishing resources per child prevails, younger siblings (those of higher birth order) are likely to receive less educational support compared to their older siblings. Consequently, older children are more inclined to engage in work-only or school-only activities, while younger children are more often involved in school-only or no school-related activities. Children from female-headed households tend to combine

both schooling and work. The education and employment status of the household head and parents adversely affect child labour, whereas they positively influence child education. Additionally, the size of the household shows a positive correlation with labour involvement and a negative correlation with educational attainment for children. The presence of literate adults in the home correlates positively with school-only activities and negatively with work-only and no school-no-work activities. However, the current study indicates that a male head of household has a favourable impact on child education. Women's participation in economic activities is limited due to various socio-cultural factors, resulting in lower income levels for females, which in turn diminishes the likelihood of children from female-headed households receiving adequate educational opportunities.

Introduction

In modern Periods, there has been a significant increase in scholarly literature concerning child labour, offering empirical insights into its characteristics and underlying causes. The exploitation of child labour, both socially and economically, is fundamentally detrimental to humanity. While there is a broad consensus on the negative implications of child labour, the primary challenge lies in determining effective strategies to combat it. Despite the legal prohibitions against child labour for minors, this issue remains prevalent in impoverished countries such as Pakistan. A comprehensive examination of the socioeconomic factors that drive child labour in developing nations is essential. This topic is currently garnering global attention and is being actively debated in both developed and developing countries. Child labour has existed in various forms long before the advent of industrialization, with the United Nations Convention on the Rights of the Child (1973) defining a child as an individual "aged 18 and under" who could be utilized as a labour resource. Following the Industrial Revolution, families transitioned from agrarian lifestyles to urban settings, where they became a source of inexpensive labour for British manufacturers. The agricultural sector in the subcontinent has historically faced challenges related to child labour, as the absence of educational institutions in rural areas often led children to work on farms, which served as a form of vocational training for future employment. The British colonial presence further entrenched the practice of widespread child exploitation in the region. Child labour in Pakistan emerged primarily during the 1960s, driven by the country's commitment to enhance its industrial sector. In an effort to eradicate child labour, Pakistan enacted two significant labour laws.

Conferring to the Bureau of Statistics (2022), amongst the forty million children aged 5 to 14 years in Pakistan, 3.3 million, representing 9.3 percent, are economically dynamic. Of this group, 2.4 million (73 % of the child labour force) are boys, while 0.9 million (27 %) are girls. The urban child population stands at 11.7 million, accounting for 28 % of the total child demographic. The proportion of child labourers in urban areas is one-eighth that of their rural counterparts.

The condition of children in Pakistan remains critical, even after the UN approved Convention on the Rights of the Child. Children are subjected to exploitation across various sectors of the economy, as they are employed in numerous fields. It is estimated that child labourers make up approximately 25 % of the national workforce. Despite existing laws prohibiting child labour, the issue continues to escalate, with over 10 million children engaged in labour [UNESCO Islamabad, June 2012]. Child labour poses a significant threat to children's participation, safety, development, and survival. This issue is particularly grave, as it impacts an entire generation rather than just

individual victims, distinguishing it from other forms of crime. Addressing the root causes of child labour is essential for implementing effective policies aimed at its eradication. Given that the demographics and regional characteristics of Baluchistan differ significantly from those of other provinces, a district-specific analysis is crucial for a comprehensive understanding of the issue. This study aims to explore the socioeconomic factors contributing to child labour in the Zhob and Sherani districts of Baluchistan.

Objectives of the study

The primary aim of this examination is to enhance the logical and experiential framework necessary for addressing the interrogation of whether, and to what extent, modifications in child schooling, family income, parental education levels, current joblessness rates, and demographic factors can efficiently mitigate youth labour. The findings of the study will succinctly outline potential policy strategies aimed at influencing changes in these variables. Specifically, the study seeks to examine the supply-side elements of child labour in urban areas. This involves analysing the relationship between parental decisions regarding their children's educational paths whether to attend "school only," "combine school and work," "work only," or "neither school nor work" and four kinds of socio-economic variables. These include child features (such as birth order, gender, age, and education), head of household characteristics (including gender, age, education, employment status, and income), parental characteristics (comprising the education, income, and employment status of both the father and mother), and household characteristics (which encompass asset ownership, per capita household expenditure, family size, and the configuration of the household, particularly the number of children aged under 5 and those aged 5-15).

Literature Review

Numerous studies (Ahmad 1991; Wiener and Noman 1995; Addison et al. Ahmad 1997) suggest that poverty is a primary factor contributing to child labour in urban areas of Pakistan. According to ADB (2002: 12), 22.4 % of the urban inhabitants survive under the poverty line, in contrast to 36.3 % in rural regions. Households in urban areas generally have a higher average income compared to those in rural areas; however, income sharing in urban settings is more uneven (ADB 2002: 10). The socio physical structure in urban areas is also superior. Karachi, the largest urban centre in Pakistan, is experiencing an annual growth rate of 3.8 %, with a population of approximately 11.8 million. Notably, around 45 % of the city's residents reside in kachi abadi and squatter settlements, and 35 % live below the poverty line. Urban children are more likely to attend school than their rural peers. The gross primary enrolment rates stand at 97 percent for urban areas and 75 % for rural areas, with girls' enrolment rates at 92 % in urban areas compared to 50 % in rural areas. This indicates not only a higher enrolment rate in urban settings but also a lesser degree of gender disparity compared to rural areas (ADB 2000: 21). This situation underscores the necessity for the present study, which aims to analyse the schooling and child labour decisions of urban households. A cluster sampling technique was employed, ensuring that the sample included households from all income groups, irrespective of the attention of child labour.

The existing body of literature concerning child labour in Pakistan includes works by Khan (1982), Hussain (1985), along with more recent contributions from et al. (1997). These investigations primarily examine the qualitative aspects of child labour. In contrast, contemporary research has shifted its focus towards the quantitative dimensions, leveraging the enhanced availability of high-quality data on child labour. Commitments to child labour significantly hinder children's participation in educational institutions. Consequently, the literature has evolved to integrate

analyses of child schooling alongside child labour, thereby examining these two factors in conjunction.

Research on modelling approaches related to child labour primarily encompasses unitary models of household decision-making, which are grounded in Becker's (1981) theories. Recent empirical findings indicate that these unitary models may not provide substantial insights into household dynamics. In contrast, an increasing volume of empirical studies suggests that collective models yield a more profound understanding of household behaviour. Moehling has refined this approach by framing the interaction as occurring between a parent and their child within the family context. Basu (1999) offers a comprehensive overview of the evolution of theories concerning child labour modelling. It is posited that investigations into collective household decision-making models have often neglected the inverse effects, revealing that an examination of the reciprocal dynamics of power and choices within the household can lead to valuable new insights regarding both household equilibrium and child labour Efforts to raise awareness about child labour issues in Pakistan and globally are on the rise. Research indicates that factors such as poverty, parental education, income levels for both adults and children, parental age, family size, and others significantly contribute to child labour. While empirical studies affirm that poverty is a crucial supply-side factor influencing child labour at both micro and macro levels, there exists a divergence of opinions regarding the relationship between poverty and child work. The majority of scholarly articles (Hussain, 1985, 1997) conclude that poverty is the predominant cause of child labour. However, some studies suggest that other factors, such as inadequate education, limited employment opportunities, and developmental issues, may exert a more significant influence on child labour than poverty itself. These additional factors seem to be the primary drivers of child labour. Research indicates that the educational backgrounds of both children and their parents significantly affect the child's work patterns. There is a consensus regarding the negative influence of parental educational attainment on child labour. However, scholars disagree on the comparative impact of maternal versus paternal education on child labour. Most studies suggest that a mother's education exerts a more pronounced negative effect on child labour than that of a father). Conversely, some research posits that a father's educational level may play a more significant role in diminishing their children's participation in the labour market than a mother's education. Additionally, demographic and cultural factors shape family decisions regarding the time allocated to children. The determinants of child labour can vary significantly across different regions due to these cultural and demographic differences. Khan (1982) provides evidence that family traditions contribute to child labor in the districts of Lahore, Gujranwala, and Sialkot in Punjab, Pakistan. Burki and Faseeh (1998) conclude that the factors influencing child labour differ across provinces, reflecting the cultural and demographic disparities between Punjab and Sindh. Chaudhary and Khan (2002) note that the social structure in Dera Ismail Khan City restricts female children from venturing outside the home, which accounts for the low rates of female education and child labour in that area. The relationship between parental employment and wages and child labour remains inadequately explored in the existing literature. Skoufias (1994) asserts that adult wages do not significantly influence the probability of child labour in India. In contrast, Rosenzweig and Evenson (1977) find that wages for both adult males and females negatively affect child labour in rural Indian districts, indicating that an increase in maternal wages correlates with a decrease in child labour. In a research, it has been concluded that a mother's employment adversely affects her child's chances of attending school while positively affecting the decision to work in Pakistan. Furthermore, numerous empirical studies have highlighted a gender gap in education within developing countries.

A significant body of empirical research concerning developing nations substantiates the existence of a gender gap that favours boys in the workforce. Cartwright (1999) indicates that in Bolivia, as well as Ray (1999) in Pakistan and Peru, boys are more likely to engage in work compared to girls. Conversely, it was revealed that in Ghana, girls are slightly more likely than boys to be employed. Jensen and Neilson (1997) report no significant differences in labour participation between boys and girls in Zambia. Numerous studies have investigated the relationship between household size and the incidence of child labour. In rural areas of India, researchers also identified an inverse relationship between child labour and family size. It was argued argue that large families with low educational attainment in Dera Ismail Khan contribute to child labour by hindering children's access to education. Furthermore, Khan (2003) finds a positive correlation between household size and child labour in the Punjab districts of Pakpatan and Faisalabad, while noting a negative correlation with school attendance.

Numerous studies have established a link between a child's age and their involvement in both work and education. Research conducted by Valassoff (1979) in India, indicates a positive relationship between child labour and age. The empirical evidence presents divergent conclusions regarding the altruistic behaviours of parents towards their children. A segment of the empirical literature suggests that parents allocate more financial resources to the education of their firstborn child. Conversely, another group of studies highlights a preference for later-born children over their older siblings. Sajid and Ahmed (2018) examined the factors influencing child labour in Quetta and Pishin, concluding that the primary driver of child labour in these areas is low household income or poverty. Similarly, Aslam and Ruqiya (2024) emphasized that the supply-side factors contributing to child labour in the Zhob and Sherani districts are predominantly linked to insufficient household income.

The preceding analysis of the literature indicates that various factors influencing child labour are contingent upon the social and economic conditions of households and their geographical locations. Consequently, most researchers concentrate on child labour studies that are specific to particular districts or regions. Furthermore, the literature review highlights the absence of district-specific research on child labour participation in Balochistan, with the exception of a study by Shaik et al. (2015), which focused exclusively on Quetta District and involved 90 children engaged in different local enterprises. Therefore, this study aims to utilize primary data to explore the simultaneous decision-making processes regarding schooling and child labour within urban households in the districts of Zhob and Sherani in Balochistan, Pakistan.

Methodology

Definitions and Concepts: For the purposes of this study, child labour is defined as the involvement of children of school age, specifically those between 5 and 15 years old, in the labour force. This includes work for wages or participation in household enterprises aimed at generating income to support themselves and contribute to the household's financial resources. A child is classified as an individual aged 5 to 15 years, with the age of 15 marking the conclusion of the school age period. Additionally, the transition from infancy to childhood is recognized at the age of five.

Household: A household is defined as either an individual living independently or a group of individuals who typically reside and share meals together under a common cooking arrangement, without any other usual place of residence.

Household Income: The income of the household, which serves as one of the economic determinants influencing child labour and child well-being, is characterized as the income

generated by non-child members of the household. This definition is based on the premise that decisions regarding child labour are made after accounting for the earnings of adults and other non-child contributors.

Household Members: This term encompasses all individuals who are either present or temporarily absent but whose usual place of residence is within the designated household at the time of data collection.

Head of Household: The term "head of household" refers to the individual within a family who holds the authority to oversee its members and serves as the primary financial provider. Typically, one of the parents assumes this role; however, in a joint family structure or in situations where parents are absent, a grandparent may fulfil this responsibility. In instances where neither parents nor grandparents are part of the household, the eldest member takes on the role of head of household, making key decisions for the family. In cases where parents or grandparents are present but are of advanced age, the next eldest individual assumes the household responsibilities.

Urban Areas: An urban area is characterized as the region encompassed by the jurisdiction of a municipal committee, while rural areas are those situated beyond the limits of such committees. If a household resides in an urban area, even if some of its members are employed in rural locations, it is classified as an urban household.

Development of Instrument: A detailed questionnaire and interview schedule were created for the study. The interview schedule was designed to facilitate straightforward analysis of the collected data using computer software.

Universe: The survey's universe included all urban households across various income levels within the districts of Zhob and Sherani.

Sample Design: A cluster sampling technique was employed for the study. The sample population was drawn from the districts of Zhob and Sherani. In Zhob district, which comprises two tehsils Kakar Khurasan and Zhob along with 24 union councils, five union councils were selected for the survey. The chosen union councils from Zhob include Babu Muhalla, Islamyar Zhob, Meena Bazar, Garda Babar, Wala Akram, and Apozai. District Sherani, which is notably underdeveloped, consists of one tehsil and 13 union councils, from which five union councils were surveyed. The selected union councils in Sherani are Dhanasir, Mani Khwah, Kapip, Shinghar Harifal South, and Shinghar Harif North.

Data Source: The primary source of data for this study was field surveys conducted across six clusters, with information gathered through a household survey. Additionally, personal observations provided supplementary insights into the subject matter.

Survey Area: To maintain the study within manageable parameters, a sample study was designed. This sample comprised two hundred urban households from the districts of Zhob and Sherani.

Survey Methodology: Data collection was achieved through interviews with the heads of households. Information was obtained using questionnaires that included dichotomous, multiple-choice, and open-ended questions. The interviews took place in the homes of the respondents, with the researcher conducting door-to-door visits to engage with the interviewees.

Model: Various econometric models exist for analysing decisions related to child schooling and child labour. Most of these models are grounded in the work of Rosenzweig and Evenson (1997),

which employs a standard constrained utility maximization framework for households. For the analysis of determinants influencing schooling and child labour, many researchers have adopted a reduced-form model our study adheres to the methodologies established in these prior works.

As well as the decision making process within the household is concerned, there is no direct example of household's decision-making process in the literature. Therefore, the sequential model approach has advantages over the simultaneous approaches. In ordered when it comes to decision-making within household, existing literature does not provide clear evidence on whether households adopt a simultaneous or hierarchical approach to decisions. The sequential model is advantageous compared to the simultaneous approach, as noted. To address the conflicting factors influencing decisions on schooling and child labor, and to evaluate the significance of each, this study empirically applies a sequential probit model. It assumes that household follows a systematic decision-making process for child schooling and child labor. Specifically, child labor decisions are examined as part of this sequential process.

P_1 = Probability to go to school and not to work.
P_2 = Probability to go to school and to work.
P_3 = Probability not to go to school and but to work.
P_4 = Probability neither to go to school and nor to work.
Probabilities for the four choices are determined as followed

- $B1 = f\,(a1X)$
- $B2 = [1 - f\,(a1X)]\,f\,(a2X)$
- $B3 = [1 - f\,(a1X)]\,[1 - f\,(a2X)]\,f\,(a3X)$
- $B4 = [1 - f\,(a1X)]\,[1 - f\,(a2X)][\,1 - f\,(a3X)]\,f\,(a4\,X)$

The standard normal distribution function id represented by f, while $b_{1,}\, b_{2,}$ and b_3 are vectors of the model parameters. The vector X includes the explanatory variables. The parameters b_1 are estimated using entire sample, whereas b_2 is estimated from the sample of children excluding those who attend only schooling. Similarly, b_3 is estimated from sample of children who neither go to school exclusively nor simultaneously attend school and work.

For "independent variables" section:

Child characteristics: The current study model encompasses several factors, including the child's birth order, gender, age in completed years, the square of the child's age, and the number of years of formal education, which serve as explanatory variables.

Head of household characteristics: This section includes the gender of the head of the household, their age, and the square of their age, their educational attainment, employment status, and income level.

Parent characteristics: The model incorporates the characteristics of both parents as separate explanatory variables. These include the number of years of education, employment status, and income of each parent.

Household characteristics: The variables considered in this category include the household's ownership of income-generating assets, such as a business, property, shop, land, or farming equipment, as well as per capita expenditures for children under 5 years and those aged 5 to 15 years.

Table-2: Sequential Probit Results for Urban Households

Variables	*First Stage* P_1= Probability that the Child Goes to School Only	*Second Stage* P_2= Probability that the Child Goes to School as well as Work	*Third Stage* P_3= Probability that the Child does not go to School but Work	*Fourth Stage* P_4= Probability that the Child neither go to School nor Work
Constant	-1.9140	-0.5248	-1.8993	1.9447
	(-1.5307)	(-2.7117)	(-1.7065)	(2.2766)
		Child Characteristics		
Bord	-0.0047	-0.0084	-0.0115	0.0186
	(-1.3302)**	(-1.2863)**	(-1.2656)**	(1.4903)*
Cgen	0.1081	-	-0.0428	-0.0122
	(1.8908)*		(-1.6251)**	(1.2869)**
Cage	0.1742	1.0852	0.0709	-0.0822
	(2.1273)*	(1.3768)**	(1.9148)*	(-1.2991)**
Cagesq	-0.0123	-0.0001	-0.0026	0.0049
	(-2.5559)*	(-1.2966)**	(1.6934)*	(1.4620)**
Cedu	0.0357	0.0111	-0.0258	-0.0795
	(1.8849)*	(4.2011)*	(-1.5641)**	(-3.0463)**
		Head of Household Characteristics		
Hgen	0.0010	-	0.0000	0.0000
	(1.3910)**		(0)	(0)
Hage	0.0654	0.0185	0.0802	-0.0968
	(1.3110)**	(0.2662)	(1.5973)**	(-2.5054)*
Hagesq	-0.0007	-0.0001	-0.0008	0.0011
	(-1.7433)*	(-0.1287)	(-1.5221)**	(2.5726)*
Hedu	-0.1491	0.0002	-0.9830	-0.2299
	(-1.3095)**	(-0.0100)	(-1.7205)**	(-2.2618)*
Hemp	-0.0903	-	-0.1703	0.2576
	(-1.6094)**		(-1.5086)**	(1.8622)*
Hy	0.0001	-0.0000	-0.0063	0.0000
	(1.1348)**	(-0.9395)	(-1.1484)**	(0.9341)
		Parent's Characteristics		
Fedu	0.2135	-0.0043	-0.9727	0.2061
	(1.4434)**	(-0.1581	(1.7131)*	(1.6348)*
Femp	0.0000	-	0.0000	0.0000
	(0)		(0)	(0)
Fy	0.0000	0.0000	0.0000	0.0000
	(0)	(0.0853)	(0)	(0)
Medu	0.2366	-0.0046	-0.0347	-
	(1.6535)*	(-1.8397)**	(-1.2836)**	-
Memp	0.1674	-	0.0381	-0.1844
	(-1.2991)**	-	(1.3180)**	(-1.3533)**
My	0.0003	3.1435	0.0000	-0.0001
	(1.5902)**	(1.2758)**	(1.3937)**	(-1.4330)**
		Household Characteristics		
Asst	0.0805	-0.0163	0.0395	-0.0398
	(1.8925)*	(-1.1514)**	(-1.6460)*	(-1.7057)*
Pcexp	0.0069	-0.1769	-0.0003	-0.0014

	(-0.7555)	(0.9755)	(1.8429)*	(-1.3786)**
Fmsiz	0.0194	-0.0053	0.0181	0.4107
	(-1.7426)*	(-1.2929)**	(-0.5195)**	(2.0796)**
Child015	-0.0287	-0.0002	-0.0914	0.0187
	(-1.4062)**	(-1.2820)**	(-1.5507)**	(1.3168)**
Child04	0.1550	0.0174	0.2039	-0.3060
	(1.2753)	(1.2801)*	(1.5504)**	(-3.1312)*
Child515	0.2258	0.0006	0.1323	-0.2026
	(1.6576)*	(2.0551)*	(1.2877)**	(-2.9017)*
No. of observations	564	106	510	684
Log of Likelihood Function	-376.9	-76.86	-160.1	-297.1
R-Squared	0.6333	0.6057	0.6090	0.5282
Percent Correct Predictions	0.8704	0.8419	0.8825	0.8987

*Indicates significant at 10 % level and ** indicates significant at 5 % level.

Initial Stage Findings: The initial stage findings indicate the likelihood of attending school rather than entering the workforce.

In the field of economics, there is no agreement on the existence of a birth order effect on children's education, nor on whether such an effect is positive, negative, or non-linear in nature (Parish and Willis 1993). Two potential scenarios have been identified. The first scenario suggests a negative birth order effect, where an increase in the number of children leads to a more constrained household resource situation, resulting in fewer resources available for each child. If the diminishing resources per child is the prevailing factor, younger siblings (those born later) may receive less educational support compared to their older siblings. Conversely, the competition for resources may diminish over time as households accumulate assets and increase their income. Additionally, older children may enter the workforce, thereby contributing to the household's financial resources. This could allow younger siblings (those born later) to spend more time in school, representing a positive birth order effect. Furthermore, economies of scale related to household public goods may play a significant role, as younger children can benefit from the educational experiences of their older siblings through informal home teaching. In conclusion, having older siblings may enhance the educational opportunities for younger children rather than hinder them, provided that the benefits from resource sharing, economies of scale, and positive externalities outweigh the competitive resource constraints.

Our research indicates that birth order is a significant factor, particularly negatively influencing the likelihood of attending school. The analysis of siblings reveals that younger children are less likely to pursue education. This trend may be attributed to resource limitations; however, a more plausible explanation could be the delayed enrolment of children in educational institutions. Furthermore, male children exhibit a higher likelihood of attending school compared to female children, a difference that is statistically significant. This finding corroborates the results of previous studies conducted. Several factors may contribute to the observed gender disparity. The scarcity of female schools in rural regions likely plays a role in this outcome. Additionally, stringent Islamic laws that confine women to domestic roles, particularly in conservative rural communities, further diminish the probability of girls receiving an education. Cultural practices regarding the selection of spouses may also lead parents to harbor negative views towards female

education. The low enrolment rates for girls may additionally reflect a shortage of qualified female teachers in schools. Socio-cultural dynamics create a demand for women educators to instruct female students, as traditional Pakistani culture often necessitates single-sex educational environments. The lack of available schools has a more profound impact on education than the quality of education itself (Shah 1986).

The derivatives of probability concerning age are positive, while the square of age yields a negative value. Consequently, the findings from the sequential probit model indicate that age plays a significant role in the decision-making process regarding child education. More specifically, this suggests that the likelihood of attending school diminishes at a decreasing rate as age increases. This outcome contradicts the common belief that school attendance declines with advancing age. We have established the minimum age for school enrolment as 5 years. At this age, children are often not enrolled in school, which accounts for the positive probability derivatives observed. Furthermore, these results highlight the trend of delayed school enrolment among children. In both the rural areas of Zhob and Sherani, this delay in school enrolment is evident. Thus, irrespective of whether the context is rural or urban, the trend of delayed school enrolment among children persists at the national level.

It has been observed that children from male-headed households exhibit a slightly higher likelihood of attending school. However, research conducted by Maitra and Ray (2000) indicated that in Pakistan, the gender of the household head does not significantly influence children's educational decisions. Conversely, Ali and Ahmad (2018) reported that in rural regions of Pakistan, children from male-headed households are less inclined to pursue education. In contrast, the current study demonstrates a positive correlation between male household heads and child schooling. Additionally, female adults in Zhob and Sherani engage less in economic activities due to various socio-cultural factors, resulting in lower income levels for women. This, in turn, diminishes the likelihood of children from female-headed households receiving an education, thereby highlighting the economic and gender-related implications.

The life cycle stage of the head of household positively influences educational attendance. As the age of the head of household increases, the likelihood of children attending school also rises. This phenomenon may be attributed to the presence of older siblings, typically over the age of 15, in households led by older heads. These elder siblings possess earning potential, which improves the household's financial situation, thereby increasing the chances of school-aged children receiving an education. Additionally, when both the children and older siblings are engaged in studies rather than work, the educational economies of scale within the household further enhance the probability of school attendance among children of school age.

The head of the family plays a crucial role in influencing decisions regarding a child's education and labour. It is widely believed that the educational attainment of the head of the household positively impacts the likelihood of a child attending school.. The influence of the head of household's education underscores the intergenerational connections between educational deficits and child labour. However, it is noteworthy that our findings indicate a negative correlation between the head of the family's education and the likelihood of a child attending school.

Furthermore, the education level of the father significantly enhances the likelihood of a child attending school, with each additional year of the father's education correlating to a 21 percent increase in school participation. Similarly, the mother's education also plays a crucial role, with one additional year of her education leading to a 23 percent rise in school attendance. Additionally,

maternal employment increases the probability of a child attending school by 16 percent. While the mother's income has a modest yet significant positive impact on children's schooling, the data clearly indicate that maternal characteristics—specifically education, employment, and income are more influential than those of the father in determining children's educational outcomes.

In households possessing assets, there is an 8 % increased likelihood that a child will attend school. The presence of assets such as businesses, real estate, land, and shops serves as a clear indicator of a household's financial status. Consequently, our findings indicate that the likelihood of a child receiving an education is consistently greater in wealthier households. Furthermore, asset ownership provides households with stability against income fluctuations, allowing for credit access or the sale of these assets.

Second Stage Results: In the second estimation stage, children who attend school exclusively are excluded from the sample. The probability calculated for the remaining sample pertains to those who engage in both schooling and work.

Birth order significantly influences decisions regarding child education and labour. It has been observed that younger children are less inclined to balance work with schooling. The child's age is a critical factor in the decision to combine education and employment, with the likelihood of such a combination increasing as the child ages. However, the negative coefficient for age squared indicates that this effect diminishes in older age groups. These findings stand in contrast to those of Maître and Ray (2000), who reported that an increase in age raises the probability of a child attending school exclusively or working solely, applicable to both rural and urban contexts.

Furthermore, the current years of education attained by a child enhance the likelihood of combining schooling and work. This suggests that children may need to work to cover educational expenses. As the level of education rises, so do the associated costs, thereby increasing the probability of balancing both schooling and work.

The education level of mothers is inversely associated with the choice to combine schooling and employment. Likewise, it shows a negative correlation with the decision to engage solely in work, while positively influencing the choice to focus exclusively on education. This indicates a significant impact of maternal education on children's decisions regarding schooling and labour. It aligns with the broader understanding that higher educational attainment is linked to a reduced likelihood of child labour and an increased rate of school attendance. Additionally, maternal income is positively correlated with the likelihood of children balancing both school and work, while it negatively affects the decision to attend neither school nor work. Given that maternal income is often associated with maternal education wherein more educated mothers tend to have better earnings prospects the influence of income on educational choices reflects the effects of maternal education. More educated and higher-earning women tend to view their children's education favourably, opting for them to attend school exclusively or to pursue both education and work, rather than remaining in a situation of neither schooling nor employment. It can also be inferred that educated working mothers recognize the value of education based on the financial benefits they have experienced themselves.

The assets held by a household adversely affect a child's choice to balance education and employment. As the quantity of assets increases, the likelihood of children from that household engaging in both school and work diminishes, while the probability of attending school exclusively rises. The existence of assets, which serve as an indicator of wealth, enhances the financial

stability of the household and reduces income variability. Consequently, households with assets are less compelled to have their children juggle education and work, as the costs associated with education are more manageable for them.

Children from larger households are less inclined to merge work with their studies. Conversely, the presence of siblings aged 5 to 15 years within the household raises the likelihood of children combining schooling and employment. Additionally, having younger siblings, specifically those under five years old, also increases the chances of children balancing both school and work, leading to competition for resources within the household.

Third Stage Results: The third stage of the assessment focuses exclusively on children who are not enrolled in school, evaluating the likelihood that they will engage in wage labour or household enterprises instead of solely participating in domestic care or remaining inactive. The birth order of the child exhibits a negative correlation with exclusive domestic work; specifically, older children among siblings are more inclined to engage solely in work. Additionally, the likelihood of a child participating in wage labour or household enterprises increases with age.. This relationship highlights the trend of children dropping out of school at higher-grade levels. Several factors may contribute to this phenomenon, including the rising opportunity cost associated with an older child's age, the escalating costs of education as grade levels increase, the limited availability of schools for higher grades compared to those for lower grades, and the higher dropout rates for girls in advanced grades due to social discrimination, among others.

The gender of the child plays a significant role, with an unexpected finding indicating that boys are less likely to engage solely in work compared to girls. The level of education has a detrimental effect on the option of working exclusively. Specifically, the current educational attainment of child labourers markedly diminishes their labour participation; all else being equal, an increase in child labour adversely affects educational opportunities, thereby establishing a trade-off between child labour and schooling.

The life cycle stage of the heads of household positively influences this dynamic. As the age of the head of the household increases, the likelihood of the child engaging solely in work also rises. Conversely, the educational level of the head of the household has a significant negative effect on the child's work participation. On average, each additional year of education for the head of the household reduces the probability of the child working by 98 %. This can be attributed to the fact that an educated head of household recognizes the drawbacks of child labour and the advantages of education. Furthermore, both the employment status and income level of the head of the household negatively impact child labour. Since the head of the household is a primary source of income, their employment stabilizes household finances and diminishes the necessity for child labour. Additionally, an increase in the head of the household's income further decreases the likelihood of the child working, as a decline in financial need correlates with reduced child labour.

The possession of assets adversely influences parents' decisions to send their children to work exclusively. However, in rural contexts, Ali and Khan (2003) identified a positive correlation between asset ownership and child labour, indicating a complementary relationship between the two.

Fourth Stage Results: The decision regarding whether a child is not attending school or engaged in homecare activities is positively associated with the child's birth order. Specifically, children with a higher birth order, meaning they are younger among their siblings, are more likely to be in a

situation of neither attending school nor working. This phenomenon accounts for the observed delays in primary school enrolment, as younger children tend to stay at home. Conversely, the likelihood of being in a no-school, no-work, or homecare situation decreases with the child's age. As children grow older, they are less likely to engage in homecare or remain out of school. Each additional year of age reduces the probability of homecare by 8.2 %. In contrast, an increase in age raises the chances of attending school, combining school with work, or working solely. This further reinforces the observation that school enrolment is often delayed in urban households in Zhob and Sherani.

Boys are less inclined to remain in a state of neither attending school nor working. Conversely, they are more likely to pursue education. This indicates a gender disparity in the decisions made by parents regarding their children. The age of the head of the household significantly influences the activities of children. Those from households led by older individuals are less likely to participate in home care or be in a state of neither school nor work; instead, they are more inclined to either attend school or engage in work.

Furthermore, the educational attainment of the head of the household reduces the likelihood of children being involved in home care. Specifically, each additional year of education for the head of the household corresponds to a 22.9 % decrease in the probability of children participating in home care. Additionally, the income and employment status of the mother negatively affect the likelihood of children being in a no-school, no-work situation.

Household asset ownership also diminishes the chances of children engaging in home care. Children from asset-owning households are more likely to either attend school, as indicated by initial findings, or work for wages or within family enterprises, as shown in subsequent analyses. Thus, as household assets increase income, families are more inclined to send their children to school. However, when faced with educational challenges—such as poor quality of education, irrelevance of the curriculum, lack of interest from children, or insufficient financial returns from education—families may opt to have their children work, leveraging the opportunities afforded by their physical capital assets. This suggests that shortcomings within the educational system also contribute to child labour.

The household's per capita income exhibits a negative correlation with the decision to neither attend school nor engage in work, indicating that children from impoverished families are more prone to remain in a no-school, no-work status. The financial constraints faced by low-income parents prevent them from enrolling their children in educational institutions or involving them in employment, thereby perpetuating a cycle of inactivity. Additionally, children from families with a high number of siblings are more likely to assume caregiving responsibilities at home. This phenomenon can be attributed to poverty, which is often exacerbated by the presence of multiple children, limiting parents' ability to provide educational opportunities or work experiences for their offspring.

Policy Recommendations

Our findings suggest several important recommendations. It is crucial to prioritize immediate improvements in educational access, as the eradication of child labour cannot be achieved swiftly; various independent factors require time to evolve.

Efforts to alleviate poverty will have a more significant impact on enhancing school attendance and eradicating child labour than other interventions. Among various poverty reduction initiatives, providing credit to impoverished households without requiring collateral is particularly important, as it allows families to avoid relying on their children for income and instead prioritize their education.

One potential policy is the establishment of affordable schools. Additionally, education subsidies can serve as a means to allocate resources to low-income families. Increasing household income through transfer payments may lead to higher school enrolment rates and a reduction in child labour. Government-supported programs, such as district education projects and integrated child development schemes in India, as well as the Food-for-Education program in Bangladesh, can serve as exemplary models for promoting education in Pakistan. Proposals for adult literacy programs are also essential. Furthermore, raising public awareness about the importance of education can significantly contribute to this cause. It is crucial to address gender disparities in education and ensure the provision of quality, technical, and relevant education.

The employment of mothers and the resulting increase in household income are vital factors influencing child education and labour. Therefore, enhancing employment opportunities for women can lead to greater school attendance and a decrease in child labour. Access to microcredit through non-governmental organizations is important for facilitating women's employment. Addressing fertility issues is also critical; thus, implementing effective population planning programs is recommended to alleviate population pressure and reduce resource competition within households.

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