# Determinants of Child Labor in Khyber Pakhtunkhwa: An Econometric Analysis

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17 February 2012

# Determinants Of Child Labour In Khyber Pukhtunkhwa:

## An Econometric Analysis

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**Abstract**

This paper examines how child labor is useful for highlighting those factors because of which parents are forced to engage their children in economic activities. The research is based on cross-sectional data collected from one hundred sampled households through field survey out of which 50 are taken from schools and 50 from market. The binary choice model was used to analyse the determinants of child labour. The results of the econometric model show that the head of the household's education and household's average income are significantly and negatively correlated with child labour. The age of the child and family size are insignificantly and positively correlated with child labour. The results of the study conclude that parental education is necessary for better future of children. The study suggests that: 1.government and private sector should provide education facilities to the lower middle and poor people of Khyber Pukhtunkhwa province. 2. Open skill development centres in rural areas and urban areas so that those who do not afford the formal education can have some skills for themselves to get the basic needs of life.

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# Introduction

Before the advent of mechanized technology in the developing world it was seen that planning and investment decisions were totally based on the question "how physical stock can be created and increased?" While looking at the population today it has been observed that developing world comprises of major part of the population indulged in physical work for earning livelihood, so because of heavy population and lack of resources labour is at maximum in this part of the world. Therefore, it can be said that developing countries were made to follow the idea that production and output are totally dependent on physical stock.

Child labor is shown as an evil that must be eradicated for humanitarian reasons, Doepke & Zilibotti (2005) and society concerning aspect among academics, professionals and the media. The mass phenomenon, Hazan & Berdugo (2002) of child labor has been viewed as an epidemic of the global economy that must be eventually eliminated Dinopoulos & Zhao (2007) and still societies trying to find the solution(s) to tackle this problem. According to Kolk & Tulder (2002) and Iram & Fatima (2008), in early 20th century and beginning of 21st century, the issue of child labor has been the subject of widespread regulatory and societal attention in all over the world.

Child labor has its roots deep into Africa but it was not only territory of the less developed countries. It was also found to be common among US and Europe too. In 1851 England and Wales, 36.6% of all boys aged 10-14 and 19.9% of girls in the same age group worked and historical evidence suggests that child labor has been part of the labor scene since time immemorial Cunningham (1990); Weiner (1991). Doepke & Zilibotti (2005) stated that until the nineteenth century most children worked in Western countries and working was generally considered to be favourable for children.

According to Ray (2000), the Industrial Revolution usually called the starting point of child labor in Europe with images of large numbers of children working in factories but its origin can be traced back still earlier to the pre-industrial era. Furthermore Ray (2000) illustrated that historians have maintained that child labor probably peaked during the expansion of the domestic season which preceded the Industrial Revolution, so child labor was not an invention of the Industrial Revolution, the changes it inaugurated ensured that for the first time children were economic factors in the system. Awareness raised about harmful effects of child labor occurred in industrialized countries during the last century. So that can be inferred that child labor is not the new social problem. Tremendous amount of literature available on the economics of child labor like Nardinelli (1990), Basu and Van (1998), Ahmed (1999), Hindman & Smith (1999), Basu (1999), Basu (2002), Brown et al, (2003), Doepke & Zilibotti (2005), Genicot (2005), Dumas (2007), Dinopoulos & Zhao (2007) and Bar & Basu (2009), among others provided comprehensive surveys of the growing strand of child-labor literature and purposed models to overcome. For instance,

"In the conclusion section of his survey Basu (1999) recognizes the need for further analytical work on the economics of child labor and states: Should child labor be banned outright? Should the WTO [World Trade Organization] be given the responsibility of enforcing restrictions on child labor through the use of trade sanctions? Should there be a legal minimum wage for adults so as to make it unnecessary Dinopoulos & Zhao (2007)".

A recent International Labor Organization ILO (2006) report revealed that in 2004 approximately 166 million children ages of 5-14 years were classified as child laborers accounting for about 14 percent of all children in this age group. In the same year, about 75 million child laborers between the ages of 5-

14 years were engaged in hazardous work which can affect adversely the child s safety, health, or moral development. In present days, this child labour phenomenon is utterly associated with the developing countries. The child labor problem is particularly severe in the Asia-Pacific region and sub-Saharan Africa, where on average 19 and 29 percent of the children aged 5-14, respectively, are economically active. Although the report documented that over the period 2000-2004 the number of child laborers declined by 11 percent and the number of children in hazardous work fell by almost 33 percent, this encouraging trend is not satisfactory ILO (2004). Moreover, in some countries, such as Mali and Bhutan, the labor force participation rate of children aged 10-14 reached 50 percent. Child workers therefore account for a large fraction of the total work force in many developing countries (ILO, 2002a; World Bank, 2002). While the ILO estimated child labor to be 52 million children in 1979, rising to 78.5 million in 1990 Ray (2000), put the figure at 100 million in 1985 (the Anti-Slavery Society, 1985). According to ILO (2010), most recent estimates suggest that there are 215 million children involved in child labor, which violates international standards in which many children are victims of the worst forms of child labor, such as bonded labor, slavery or practices similar to slavery, production and trafficking of drugs or other work which is likely to harm their health, safety or morals. But argument about ILO figures and statistics about child labor that they do not regard cooking, cleaning, child care and other domestic duties as child labor, since such duties are undertaken to some extent by children in all societies Ray (2000). In the case of Pakistan, out of the 40 million children 3.3 million children (in the 5-14 years age group) are economically active on a full-time basis. Of the 3.3 million working children, 73 percent were boys and 27 percent girls. Contribution of children to work in rural areas is about eight times greater than in urban areas. The number of economically active children in the 10-14 years age group is more than four times the children in the 5-9 years age group. 74 percent of children are mostly engaged in the agricultural sector in rural areas, whereas 31 percent of working children are engaged in the manufacturing sector in urban areas. In both areas, the percentage of girls working in manufacturing and services is higher than that of boys; this indicates that girls are more likely to work in the manufacturing and services sectors as compared to boys. It is also observed that in the non-agricultural sectors, most of the working children (93 percent) are engaged in informal activities Federal Bureau of Statistics (1996). Child labor is more prevalent in rural than in urban areas. In rural areas, there is more agricultural activity, which is one of the main sectors of child employment, often on commercial plantations and without any form of payment Ahmed (1999); ILO (2002b).Social and cultural norms are more traditional in rural areas leading to a higher social acceptability of child labor. These findings about agricultural activities and social acceptability of child labor in rural areas are similar of Pakistan situation. The key determinants of child labor must discover to formulation of effective policies in condensing and eventually eliminating child labor.

## 1.1 Objectives of the Study

The objectives of this study are to find the socio economic causes having relationship with child labour in markets of Khyber Pukhtunkhwa based on the previous studies at different periods. These are as under:

    i. To find out the relationship between low family income and children working for wages.

    ii. To find out the relationship between education of head of the household and children working for wages.

    iii. To find out the relationship between size of the family and children working for wages.

    iv. To find out the relationship between children's age and children working for wages.

# 2 Material and Methodology

This section discusses mechanics of the research study. It describes the data used for empirical work and the hypotheses to be tested. It also describes empirical model.

## 2.1 Description of the Data

There is almost same type of inhabitants living in Khyber Pakhtunkhwa province with almost same way of living as well as the cultural norms. Based on this information the data collection points were marked as Kohat and Hangu. Data for this study was collected using questionnaire from schools and different areas where children were found working. To achieve objectives of the study 50 responses were collected via survey from 3 reputed schools namely St. Joseph's Convent High School Kohat, The City School Kohat and The Daffodils Model School Kohat[1]. All the students were aged between 5 to 15 years. In the same way 50 observations were collected from different places of Kohat and Hangu where children of different categories of work like garbage waste collectors from the streets, waiters, family owned businesses (burger shops and general stores), automobile shops and tailoring were found and interviewed. While looking at the data here it has been found that head of the household is male and in this fathers, brothers and uncles. The average educating years of the head of the household in case of children working was very low and was found to be 2.14 years. This shows that education of the household is very vital in this regard to make them aware of the long term benefits of the education of children. Usually when parents are not educated they think about the short term goals and engage their children in economic activities so that they can be of great benefit for getting the basic needs ignoring the fact that in long term these children will be giving them great return. It has been observed that the average household income of the family in this case is 11198 rupees per month. This referred income is generated from different sources which are cited in the table below:

Table 1: Income Sources of families where children are working Vs. School going children

| Income Sources (Working Children) | Income Sources (School going Children) |
|---|---|
| Driver | Income From Abroad |
| Waste collector | Fitness Club |
| Poultry Shop | Businessman |
| Fruit and Vegetable Sellers | Fruit Seller |
| Meat Shop | Jewellery Shop |
| Construction Labour | Property Rent |
| Rickshaw Driver | Driver |
| Barber | Government Servant |
| Security Guards | Teacher |
| Junk Food Seller | Travel Agent |
| Gardner | Army Officer |
| Mechanic | Doctor |
| Baker | Engineer |
| Cobbler | Beauty Parlour |
| Utensil Seller | Shopkeeper |
| Waiter | |
| Watchmaker | |

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[1] Due to lack of good schools and reliable information, schools were taken from Kohat region.

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From the above mentioned figure of 11198 rupees per month on average, father was found to be contributing maximum amount i.e. 49.8 percent while mothers and other sources contributed to about 50 percent. Parental presence is said to be an important for a child to go to school. It was found from the data that there were 10 children whose fathers were dead and they were made to quit the education to earn the livelihood for themselves and family.

While on the other side out of 50 observations there were 17 children from primary level of education and remaining were from secondary level of education. It was found that for out of 50 respondents for 48 head of the households were found to be male and for 2 head of the household were mothers. Average age of the head of family was found to be 46.2 years, while educating years were found to be 11.5 years. this showed that with the educated heads of the households , long term benefits of children were considered at maximum and they were send to school for getting education. From the average income of 44030 rupees per month father was found to be contributing 83.32 percent while rest of the amount was covered by mothers and other income sources. It was found here that income was dominant factor to play role in educating the children.

Beside income, education and parental age were also said to be important factors. Father's educating years were found to be 11.8 years on average which were found to be greater as compared to those of mother which were found to be 7.8 years. With increased educational level there come more and more awareness about social problems out of which early marriage is one and people due to this education were tended to discourage this tradition. With the discouragement of this tradition fertility rate stays stable and there was found no increase in population.

Out of total working population of Khyber Pakhtunkhwa the total working population was found to be about 0.003 percent. Based on the above information and information related to children and household questionnaire was constructed. The information which was included in the questionnaire was divided in two parts child related information and information related to household. The child related information comprised of child's gender, age, schooling, nature of work, monthly income from the work and time on work. On the other hand household information included location of the household (urban or rural), family information, working and dependent members in the family, mother and father information related to the age, working and education. The tabulated form of the description is given above as follows:

Table 2: Data Description Based on Average Statistics

| | Status of Children | Work | School Going |
|---|---|---|---|
| | Number of Children | 50 | 50 |
| | Child's age (Years | 5-15 | 9-15 |
| Head of the Household | Male | 50 | 48 |
| | Female | | 2 |
| | Head of the Household's age | 46.4 | 46.2 |
| | Head of the Household's Education (Years) | 2.14 | 11.5 |
| | Household Income (Rs) | 11198 | 44030 |
| | Total Family Size | 10 | 8 |
| | Dependents in the Family | 7 | 4 |
| Father's Information | Alive | 40 | 47 |
| | Age (Years) | 37.2 | 46.2 |
| | Education (Years) | 1.46 | 11.8 |
| | Income (Rs) | 5578 | 36687.5 |
| Mother's Information | Age (Years) | 39.9 | 38.4 |
| | Education (Years) | 0.4 | 7.8 |
| | Income (Rs) | 0 | 2610 |

### 2.1.1 Data Limitations

While collecting the data there were problems faced due to the location. The selected areas were Kohat and Hangu where working of girls and women were discouraged irrespective of the economic situation of the family. Female education was also not an encouraged and they were made to stay at home and help in daily household activities. Due to these problems while collecting the data only male population was the targeted population for data.

### 2.2 Theoretical Framework of the Supply of Child Labour

Determinants of child labour have been looked from both supply and demand sides. In past many studies had been conducted while taking into the account supply side and stress by conventional policy makers was also on it. This made supply side determinants more important with time. In past there were many models which followed the theoretical framework of supply side determinants in which the basic model of household decision making will be discussed.

### 2.2.1 Basic Model of Household Decision Making

It was the pioneering work of Rosenzweig and Evensson (1977) , Becker (1981) , Schultz (1997) , Cigno and Rosati (2000) which lead to the development of theoretical models of child labor .It was considered to be  a fact that parents expected to maximize their lifetime utility to depend on their number of children , average education and health of children , activities of husband and wife , composite household commodity , distribution of time between leisure and work by both father/husband and mother , child education and home production while child distribute his time to the education , work (market work or daily household functions) , leisure and home production.

Uncompensated cross-elasticities in this model concerning children can be stated as "An increase in the sources of income of household will lead to more attainment of education of child as there is more income in hand. When there is more income in hand there will be decision by the parents to send the child to school".

Among many determinants, poverty is said to be a critical factor of causing child labor, which has been highlighted in many prominent literature. In this case Basu and Van (1998) was referred as the important framework for this argument, in which they explained the case by multiple equilibria. They proposed "luxury axiom" and "substitute axiom". **Luxury axiom** states that household send the children only to work when the household is unable to meet the economic needs required to live. On the other hand household shall withdraw children out of work if they are meeting the economic needs from both the ends required to live. Many empirical evidences were shown from the past showing relationship of living standard or income and child labour.

### 2.3 Analytical Technique

Both ordinary least square (OLS) and logistic regression can be used while dealing with binary outcomes. However as it can be seen from the data that there is high variation in between the data and normal distribution might get violated along with homogenous error assumption. Thus, it can be said that in this case of binary logistic regression is the most appropriate method used. Here in this case we can go with the OLS procedure and then compare its R-square, F-statistic and chi-square outcomes with those of logistic regression along with the results of heteroskedasticity test. But if we select logit in this case, then significance can be compared by taking into the account Wald chi-square statistic commonly applied as suggested by, Mendar (2002). Here Wald test of logit is playing similar role to that of F-test or t-test of OLS.

Parents decide about their children's future by allocating it into two activities.

i.   **Child going to school:** This is a self-explanatory work performed by a child and he/she is found not working for any form of wage. Besides school going child is also said to perform some domestic work (work related to his own home) and this type of work is not considered as child labour. So the children who do full time study along with some domestic work are called students.

ii.  **Child going to work:** Children who go to work and get some wage in response or work at some family business are included in the definition of child labour.

### 2.3.1 Logistic Regression

Logistic regression or it can be better said (logit regression) is used to analyze the primary data. In this sort of regression for linear models the outcome variables are measured on a binary scale like present or absent, yes or no, true or false and right or wrong. In this study the outcomes are in the form of either presence or absence of child labour, so logistic regression is used.

Logistic regression was first introduced by Berks in (1944), who showed how the model could be fitted using iteratively weighted least squares or (WLS). Logistic regression is used mostly as an important tool in researches related to the field of social sciences whenever there is a need for or the result is in the form of two categories (two category response variables).

Now let's look at the basic or most precisely the generalized form of the model. As there are problems associated with the linear or simple regression that it takes the 1's and 0's of the dependent variable as it is which makes the result not that much fruitful or reliable. So in most of the cases to have the positive and fruitful results the transformation used is the logistic regression and it is mathematically defined as:

$$logit\ (p) = \ln\left(\frac{p}{1-p}\right) \qquad (1)$$

As it is observed that p value is either 0 or 1 in this case, so the logit (p) can assume a value based on the real line. The required form of the model is now:

$$P_i = E\left(y = \frac{1}{X_i}\right) = \frac{1}{1+e^{-(\beta_o + \Sigma\ i_i X_i)}}$$

$$p = p(x) = \frac{e^{(\beta_o + \Sigma\ \beta_i X_i)}}{1+e^{(\beta_o + \Sigma\ \beta_i X_i)}}$$

$$\ln\left(\frac{p}{1-p}\right) = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots\ldots + \beta_n X_n \qquad (2)$$

Such model is said to be the logistic regression model.

## 2.4 Empirical technique

To find out the determinants of child labor in Khyber Pakhtunkhwa, certain variables are taken into account. These variables include child age, head of the household education (father, mother, uncle, brother and grandfather), household income (it includes all income sources and employment status of the parents) and family size. Logit model equation in this will become:

$$Y_i = \beta_o + \beta_1 CAGE_i + \beta_2 HEDU_i + \beta_3 HINC_i + \beta_4 HT_i + \mu_i$$

In the above equation β's are regression co-efficient defined below:

Y = 1 if the child is working (child labour); 0 otherwise
$HEDU$ = head of the household education
$HT$ = family size
CAGE = Child's age
$HINC$ = Household income and $i = 0, 1, 2, \ldots\ldots, n$.

i. **Education of head of the family**

Parental education plays an important role in the upbringing of a child. The education makes it easy to decide about the future of a child .i.e. whether he is to work or to go to school. According to Sakamoto (2006) if father is educated till secondary level there will be fewer chances to send a male child to work. Also Sakamoto (2006), Khan (2003) and Deb and Rosati, (2002) confirmed that educated parents will send their children to school. There were

cases reported by Deb and Rosati (2002), where parents with less education themselves were still found willing to send their children to school.


**ii.     Average Income of a family**

Income plays a major role in deciding about family's status about poverty. Khan (2003) found in his work that as school' costing (expenses by parents on child's education) decreases, this will have an impact on future employment in a family which will eventually leads to low income. Location of a house also very important factor in this regard to show that how much income do family have (is family living in rural or urban area) Tharmmapornphilas, (2011), Abrar and Ghouri (2010).


**iii.    Family Size**

It can be generally observed that when there were more mouths to eat and fewer hands to feed because of earnings, parental decision will lead the children to go for economic activity. Households with large family size were more likely to be poor compared to those with small family size, Akarro and Mtweve (2011). Children in the bigger family were seen to have less schooling , less literacy rate in the family and also more behind in the school grade and more likely to be at work ,  Ponczek and Souza (2007). Regarding the family size it was also seen from the different studies that many children were found working with the earners present in the house but they do it for wages in order to support the family as compare to those who still work but not for wages, Abrar and Ghouri (2010).


**iv.     Child's Age**

Age of the child is considered to be an important factor in deciding about child's schooling, Durrant (1998). Khan (2003) , in his work found that parents do not forgo earning which they will have from older child, so making him dropping out from school and engaging him in economic activities.


**3 RESULTS AND DISCUSSIONS**

In this section results will be discussed on the basis of which determinants are found. Sample respondents were given questionnaires to which they responded by their own or they were extended help to fill the questionnaire. The questionnaire was divided into two parts, factors and outcomes which are the prime causes of child labour.

**3.1 Estimates of Empirical Results**

The descriptive statistics based on selected variables include mean, median, maxima or (maximum value) and minima (minimum value). Results of descriptive statistics are shown in table 3 below:

Table 3: Descriptive Statistics

|  | Mean | Median | Maximum | Minimum | Std.Dev. |
|---|---|---|---|---|---|
| Total Family Size | 9.4 | 9 | 25 | 4 | 3.8 |
| Mother's Age (years) | 39.4 | 38 | 62 | 23 | 8.41 |
| Mother's Education (years) | 3.9 | 0 | 16 | 0 | 5.6 |
| Mother's Income (Rs) | 1294.7 | 0 | 35000 | 0 | 5630.2 |
| Income of the Household (Rs) | 28304.2 | 16000 | 200000 | 3000 | 29611.6 |
| Head of the Household's Age (years) | 46.81 | 47 | 100 | 16 | 12.4 |
| Head of the Household's Education (years) | 6.7 | 5 | 21 | 0 | 6.2 |
| Father's Income (Rs) | 20841 | 12000 | 135000 | 0 | 23972.4 |
| Father's Education (years) | 6.3 | 5 | 21 | 0 | 6.4 |
| Father's Age (years) | 41.7 | 45 | 100 | 0 | 17.7 |
| Dependents in the Family | 7.2 | 6 | 21 | 2 | 3.4 |
| Child's Age (years) | 12.7 | 13 | 15 | 7 | 2.1 |
| Child's Income (Rs) | 1036.3 | 300 | 7000 | 0 | 1548.3 |

The average value for number of members in the family was found to be 9 (9.4). Maximum of 25 family members was due to the presence of joint family system present due to the area of study. This maximum family size was found in the households where children were sending to work. On the other side low family size was mostly reported in the households where children were sending to school. The lowest number was found to be 4 in this case.

Mother's age was another factor reported as a cause of child labour. Average age of mother was found to be 39.35 years with maximum of 62 years and minimum of 23 years. Education of mother was found to be reported as an important factor as it is said to be a deciding factor about child's status of either going to school or going to work. Mother's education in this case on average was found to be 3.9 years with maximum of 16 years and minimum of 0 years. Working mothers were found to be in low proportion resulting in the low income earned by mother. On average it was found that mother contributed 1294.73 rupees per month with maximum of 35000 rupees per month and 0 rupees at minimum.

Income (Hinc) which is representing average income of the household, it was found that on average a family was found to earn 28304.21 rupees per month. The income sources from which this income was said to be earned are van driving, sewing, garbage and waste collection, fruit and vegetable selling, working abroad, meat shop, mechanics and also loans were found part of the incomes. Maximum income per month of the household was found to be 2 lac while minimum was found to be 3000 rupees.

Education of the father was another factor found to be responsible for child's future. It was found from the survey that average educating years of father were 6.7 years with maximum of 21 years and minimum of 0. This mean that as education years of father are on rise decision regarding child's future will be more towards schooling.

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Father's income plays a major role in overall income of the family as in majority areas of Khyber Pakhtunkhwa female employment was found to be discouraged which was one of the causes of gender discrimination. Father's mean income per month here as mentioned in the table above is 20841.5 rupees with maximum of 135000 rupees and minimum of 0 rupees (unemployed). On the other side father's age was found to be on average 41.72 years in which maximum was found to be 100 years and minimum was found to be 0 (0 here is mentioning father is dead long time ago and this variable has no important role in decision regarding children). From the data it has been found that there are more mouths to feed and few hands to earn. From the data it has been observed that mean dependents in the family are 7 (7.14) with maximum of 21 and minimum of 2 members. Lastly as table shows child's mean age is 12.67 years with minimum of 7 years and maximum of 15 years and children at working were found to be contributing 1036.31 rupees per month to the total income of the household. Maximum income in this case was found to be 7000 rupees while minimum was found to be 0 rupees.

Table 4 Results of Logit Model

| Variable | Coefficient | Std. Error | z-Statistic | Prob. |
|----------|-------------|------------|-------------|-------|
|          |             |            |             |       |
| C        | -1.731315   | 3.65038    | -0.4743     | 0.6353 |
| CAGE     | 0.430655    | 0.25235    | 1.70661**   | 0.0879** |
| HEDU     | -0.27856    | 0.09132    | -3.0505*    | 0.0023* |
| HINC     | -0.000277   | 7.95E-05   | -3.4873*    | 0.0005* |
| HT       | 0.321526    | 0.17258    | 1.86301**   | 0.0625** |

(CAGE = child's age, HEDU = household head education, HT = household or family size, HINC = household income per month) * And ** are showing significance at 5% and 10% respectively.

The results of logit regression are shown above in table 4. Summary statistics of logit model are shown below in table 5. The iteration in this case of logit model are 7 and to have a value of good fit $R^2$ value shown is said to be Mc Fadden $R^2$ and it is 0.756102 or 75.6102 percent.

Table 5: Summary Statistics of Logit Analysis

|                      | Summary Statistics |
|----------------------|--------------------|
| Number of Iterations | 7                  |
| Mc Fadden $R^2$      | 0.756102           |

To find out the determinants of child labour four variables of importance are taken namely child's age (CAGE), head of the household education (HEDU), average income of the household (HINC) and family size (HT) as shown in table 4. From the results it has been found that Head of the Household Education (HEDU) and average Household Income (HINC) are significant at 5% while child age and family size is significant at 10%.

Out of four variables as mentioned above average household income (HINC) and education of head of household (HEDU) were found to have negative relation with child labour. While with family size (HT) and child's age (CAGE), child labor is said to have a positive relation.

The relationship between family size and child labour is found to be positive and statistically significant at 10%. The family size is found to be a strong estimate of child labour. It is due to the fact that when there are more births in the family, it results in increase of dependents. This rise in number of dependents will result in more mouths to feed and also there will be economic burden. To balance the economic burden and number of earners and feeders in the family parents decide about child's future and will send him to work. The positive sign was also observed during the study by Abrar and Ghouri (2010) and Khan (2003).

The relationship between child's age and child labour is found to be positive and statistically significant at 10%. This result shows that an adult child will not be going to school to get education .i.e. an adult child in a family will be sacrificing for younger siblings so that they live their life with ease. As child grows up responsibilities on his shoulder increase and he start helping family in earning livelihood. In past there were cases in which adult child in the family was found leaving school to earn livelihood for the family. So with the passage of time he forgoes his needs which results in more probability of dropping from school. Positive relation of child labor and child age was observed in different studies like that of, Khan (2003).

The relationship between education of head of the household and child labour is negative and statistically significant at 5%. From the survey conducted for this study it has been seen that majority of the head of the families are father who is responsible for all the economic needs of a family. Results here show that when father is not educated, he will send his child to work while looking to the short term gains achieved from the child both regarding his future and for household. On the other side an educated father while having a sound employment status and earning good income , this will help the father about decision regarding child's future and he will send child to school. Educated and well employed head of the household (father) will look for the long term gains both for child and family. The same sort of relationship was observed by Wahba (1998), Ponczek and Souza (2007) and Mahmood et al. (2005).

The relationship between average income of the household and child labour is negative and statistically significant at 5%. It is seen that when there are more sources of income or both the parents and members of the family are earning, it will also help in the decline of child labour. It is observed from the study that those children, who are engaged in work, lack the above mentioned factors as a source of income (resulting in poverty). Poverty is because of the fact that there is lack of education, skills and high family size where there are more mouths to feed and fewer hands to earn. So such families live below the poverty line or they are more precise to be labelled as poor because of the fact that they cannot earn or get the basic needs of a family. The children in such cases will be more liable to go to work as it will become impossible to meet the basic needs of a family. Such type of behaviour was also observed during the studies of Abrar and Ghouri (2010), Mahmood et.al (2005) and Khan (2003) and also, on the side of poverty, there is positive relation, Ray (1999).

## 4 CONCLUSIONS AND POLICY RECOMMENDATIONS

### 4.1 CONCLUSIONS

The objective of this study was to find out the determinants of child labour in Khyber Pakhtunkhwa. The results of this study showed that the greater the family income and parental education, lesser will be the child labour and the higher family size greater will be child labour. It was seen that when there are parents working, age difference between the parents is more (showing the late marriage). In case of good education and ability to earn the basic needs for family in such cases there will be no child labour. While on the other side lack of education, high family size, elder children, poor households and early marriages will encourage the child labour as the basic needs will not be obtained easily. For this purpose children will be found working and participating in economic activities.

The result further indicates that the major determinant which plays role in encouraging the child labour is family size.

The important conclusions which can be drawn from this study are, (1) to improve the parental education, (2) parents should be encouraged to send the children to school as it will help in future and (3) there should be equal distribution of resources as well as income which will also discourage the child labour.

### 4.2 POLICY RECOMMENDATIONS

An increased awareness in the family planning can be done by educating parents. Beside this there is a need to aware the population of early marriages which results in high rate of birth causing increase in the population. The late and timed marriages should be encouraged as it will result in controlling the birth rate which, as a result, will decrease the gap between earners and feeders.

Although there are educational institutions for male and female in separate and in combine, but where there is a standard of education, the expenses cannot be borne by the poor households or the low middle class families. In this case, the options left with such families is that of either go for sub-standard schools or say no to education. The need of time is to make better policies in this regard by the government at maximum followed by the private sector. For education sector there should be at minimum up to 20 percent allocation of the budget as done by the government of Malaysia in the past which made the education for all a success. There should be incentives for the teachers who will help in educating the population in far flung areas, and standardized schools should be constructed in such areas. In order to improve the average household income of a family steps can be taken in this regard to ensure the educational policy should be made for all and on equality basis. To curb the issue of poverty, there should be equal distribution of income and resources which will help in getting the basic needs or with the resources like land they can start business of their own and start earning for themselves and family. There is a need for skills to start a business. Government should open the vocational training centres to develop these skills. Such centres should be established in far flung areas wherefrom access to the cities is difficult. Beside such centres government should also give unemployment allowances to the family to discourage the child labour. But the amount of this allowance should be such that parents only decide to send their children to school. To discourage child labour, government should also introduce free education schemes by giving books, uniforms and monthly stipend so that educational expenses don't become burden on the family and child in future should not be used for fulfilling the economic needs of the family.

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