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Impact Of "Food For Education Program" On Child Labour Incidence in Tribal Districts Of Khyber Pakhtunkhwa, Pakistan

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ABSTRACT

This study assesses impact of Food for Education program on child labour incidence in Khyber Pakhtunkhwa's tribal districts. These districts formerly comprised Pakistan's FATA, which was affected by a protracted conflict that resulted in human, public and infrastructure losses. The tribal districts that now encompass the FATA region share many socio-economic characteristics. Moreover, the FATA region was recently affected by a large scale conflict that resulted in large numbers of its inhabitants getting killed, as well as destruction of public and private infrastructure and loss of livelihoods. This also resulted in limiting access to the region. Keeping this in consideration asample size of h Purposive sampling, 427 children were selected from Mohmand Tribal district. The dependent variables were children involved in schooling, those involved in child labour, and household chores. Explanatory variables included children, parents and household socio-economic characteristics. The analysis was done using descriptive statistics and a multinomial logit regression technique. Results show that the FFE program significantly reduced child labour incidence.

Keywords: Child Labour, Child Schooling, Food for Education (FFE), World Food Programme (WFP), Khyber Pakhtunkhwa's Tribal districts, Socio-economic Determinants of Child Labour.

1. Introduction

Child labour has several consequences, not only for the household but also for society. Through their decision not to enrol children in school, a household may deprive its children and itself of benefits and deprive society of the benefits associated with higher earnings in the future. Thus, a household decision to not invest in child schooling reduces the household's chances of escaping the vicious circle of poverty in future.

Besides depriving of the benefits of schooling, the household decision of child involvement in labour activities may expose its children to sexual abuse, physical injury and other social and health problems. Consequently, the household's decision to engage its children in hazardous labour activities eventually deprives society of healthy and productive citizens. However, many

poor households in the developing world send their children to meet their subsistence consumptions (Edmonds, 2007).

Generally, low-income status, subsistence-based consumption and low demand for children education adversely affect households' decision of child schooling (Dheressa, 2011). Poverty affects the incidence of child labour via several channels. Firstly, children from subsistence-poor households can contribute to their families' consumption through income earned from labour activities. Secondly, the marginal utility of income is very high in poor households. Therefore, children's education's opportunity cost exceeds the benefits of education, and child labour is often substituted for child schooling. According to the World Food Program report (2004), poor households spend 60-70% of their income on food, and their income mainly depends upon adult labour income and child labour income.

Besides, other socio-economic determinants of children, parents and households may cause the incidence of child labour. These determinants include child gender, parents' age, parents' education, parents' employment status, number of dependents in household and family system etc. Thus remedying the child labour problem, economic measures, and legislative regulations, are necessary to be practised and implemented. Firstly, Policy design to combat child labour varies from region to region depending on the major causes of child labour incidence. For example, a state's investment in education may not lead to a reduction in child labour when a significant segment of masses is ignorant, and they are less aware of the future benefits of education. Secondly, households do not send children to school if the future benefits from education are lower than education costs. Thirdly, in developing countries (especially in rural areas), people discriminate amongst their children based on their gender despite household income status. In many studies conducted on the determinants of child labour, gender was a critical factor in child labour incidence. It has also been found empirically that female children are mostly engaged in household chores. In conclusion, the policy to combat child labour should be designed to keep both the economic and social status of masses.
Therefore, in response to social and economic challenges, several approaches are popular amongst the academic community and development practitioners to resolve child labour. For example, Todaro and Smith (2011) have mentioned four effective approaches to combat child labour's menace across the world. The World Bank stresses on the reduction of poverty for the elimination of child labour. The World Food Programme (WFP) favours the elimination of child labour through enrolment in schools. It encourages kids' enrolment in schools through the distribution of food items amongst poor children who have a high probability of joining the labour market. The United Nations Children's Emergency Fund (UNICEF) supports a complete ban on child labour through laws and regulations. It argues that child labour should be eliminated through the promulgation of minimum working age law. However, the International Labour Organization (ILO) supports a partial or gradual ban on child labour through laws and regulations. It argues that the worst forms of child labour should be eliminated in the first place, and afterwards, the ban should be extended to less exploitative child labour. The first two approaches to combat child labour are more aligned with contemporary labour economics' assumptions and theory. People are rational, and therefore they may act to maximise their self-interest, i.e. utility or consumption. They may send their children to labour market instead of schools if the returns (wages etc.) from the labour market exceeds the return (distribution of cash and food items among the school going kids) from leisure/schooling. Their decision to send children to the labour market may also depend upon the family's labour and non-labour income other than child labour income.

Food for Education (FFE) is a tool which today effectively enables hundreds of millions of poor children worldwide to attend school—in developed and developing countries alike. This program has three forms of food transfers; one is School Feeding Program (SFP), second is Take-Home Ration (THR), and third is the Food for Education (FFE) which is the combination of SFP and THR. The objectives of the FFE program are to enhance primary school enrolment in food-insecure areas. Similarly, the program is also aimed to reduce the dropout rate, improve attendance in primary schools (boys and girls) to improve the concentration span and learning capacity of students by alleviating short-term hunger and mitigating micronutrient deficiency at primary level (WFP, 2019)

According to the World Food Programme (2014), World Food Programme operates its

FFE program in Khyber Pakhtunkhwa's Tribal districts in collaboration with the exFATA Secretariat, UNICEF, World Bank and other local partners. The FFE intervention aims to enhance enrolment in schools by providing a food transfer (vegetable oil) for home use. Simultaneously, fortified food (high energy biscuits or HEB) is intended to increase micronutrient intake among school children. This intervention was implemented only in Khyber Pakhtunkhwa's Tribal districts, where literacy enrolment rates are low, particularly for girls. Moreover, school attendance is hugely beneficial to children in the context of displacement and insecurity. The targeting of boys and girls at the primary level for School feeding (SFP) and take-home rations (THR) of oil is also provided. The provision of a two monthly ration of oil (4.5kg) acts as a pull factor to encourage attendance and reduce the dropouts rate and the provision of a fortified food on-site daily ration in the form of HEBs (75g) seeks to alleviate hunger, provide a nutritious supplement to increase micronutrient deficiency and enable learning.

In this study, we examine theeffectiveness of FFE in curbing child labour and investigating other socio-economic determinants of child labour in the erstwhile FATA, now known as Khyber Pakhtunkhwa's tribal districts. However, surveying the entire FATA region was impossible due to the prevailing security situation, its widespread territory and limited resources. Moreover, all tribal districts share similar socioeconomic characteristics. Therefore, sampling from any district can represent the entire population.

2. Review of Literature

Studies conducted on schooling and child labour determinants reveal that the cost of schooling increasesthe probability of child labour. In developing countries, parents' decisions about their children depend upon the direct and indirect costs of schooling. For example, a study conducted by Tsang (1994) found that the direct cost of schooling is a financial burden on households in developing countries. To increase school enrolment in developing countries, Deininger (2003) and Hazarika (2001) found that the direct costs were the main element that discourages households from enrolling their children in school. However, Grootaert (1999a) found no such correlation amongst the direct cost of schooling, child schooling and child labour in rural Cote d'Ivoire. Therefore, some international education initiatives are active to increase enrolment through the elimination of the direct costs of schooling (Zafar et al., 2021; UNESCO, 2005). Shafiq (2007) used Bangladesh's survey data to examine the impact of direct and indirect schooling costs on enrolment by eliminating rent. He found that the direct cost of schooling affects households' decision; for girls, if households face transportation cost, then girls combine school with work. While for boys, private tuition fees discourage households schooling's enrolment deci found that indirect cost of schooling is high in rural Bangladesh, and sometimes if households enrol their children in school, there is a probability of part-time paid child labour. He concluded that the transfer policy of increasing school enrolment and eliminating child labour would be effective only when it covers both direct and indirect cost of schooling. In order to increase school enrolment through food transfers, Food for Education (FFE) has been initiated by the World Food Programme in many developing countries and even in developed countries. Subsistence-foods spend 60-70% of their income on food, and their consumption depends on adult and child labour income. Due to this reason, poor households are unable to send their children to school. Therefore, School feeding and take-home rations compensate households' consumption and encourage them to enrol their children at school. The program aims to offset direct as well as indirect costs of schooling (Asif et al., 2017; WFP, 2004). Case studies conducted by World Bank (2012) to evaluate World Food Programme's school feeding and take-home ration program on child school enrolment in Burkina Faso, Lao People's Democratic Republic (Laos) and Uganda. For evaluation of programs, schools were randomly assigned to three groups: take-home rations, school feeding programs and the control group (exempted from both programs). To investigate the difference in enrolment, a baseline household survey was conducted in 2005 before launching the programs, and a follow-up survey was conducted in 2007. The survey covered households with children ages 6-17, and a total of about 4,236 children were drawn from random sampling and included in three different

groups. Their findings show that conditional with proper implementation of school feeding and take-home ration program; enrolment increased in all three countries. Cheung and Berlin

(2015) carried out a study to evaluate the food for an education program in six Cambodian provinces, and they found that the program increased school enrollment in all the intervened schools in the short-run. However, they found that the program doesn't impact the higher educational achievement of the treatment group. Many other studies have been carried out to investigate whether the FFE program covers direct and opportunity cost of schooling. For example, Ravallion and Wodon (2000) evaluated the impact of Food for Education (FFE) programme on eliminating child labour in rural Bangladesh. In this regard, they analysed the trade-offs between school and work participation decision of beneficiary households and nonbeneficiary households using a separate probit model. They found a strong positive association between FFE transfers and the probability of school participation and a negative correlation between FFE transfers and labour activities. Gelli et al. (2007) conducted a study to investigate whether food for education is more favourable for female school enrolment or male school enrolment; research was conducted in 32 SubSahara African countries. Results showed that absolute enrolment in WFP assisted schools had increased both for boys and girls. Vermeersch and Kremer (2004) conducted a survey in Western Kenyan districts between 2000 and 2002 to analyse the School Feeding Program's impacts on school participation and achievement by using a Randomised Controlled Trial. Their results show that children in the treatment group participated more than children in a controlled group, and the difference between treatment and the controlled group was found statistically significant. But they concluded that in the absence of quality teachers, school feeding programs would increase school participation without quality education. Grantham-McGrengor, Chang & Walker. (1998) used the crossover trials in Jamaica to investigate the impact of school feeding program on school performance indicators (school enrolment, class attendance, dropout rate, repetition of grades, school attainment levels, cognitive function, and class-room behaviour) of 13 beneficiaries. They found that school feeding program affected all the performance indicators positively. Ahmed (2004) investigated the impact of school feeding program on enrolment through an experimental research design in Bangladesh. His results showed a statistically significant increase in the treatment group. However, he ignored the possible effects of other unobservable household characteristics in the treatment area that could affect a household's child enrolment decision. Therefore, it appears unclear that the difference in enrolment rates between treatment and control groups resulted from the school feeding program. However, some studies revealed no empirical evidence of the significant positive impact of FFE on enrolment. For instance, He (2009) found that the School Feeding Program has no positive impact on enrolment. Besides the increase in school enrolment, School feeding program encourages class attendance. For example, Powell et al. (1988) investigated the impact of school feeding program between treatment and controlled group of 814 children and found improvement in class attendance of treatment groups. Buttenheim, Alderman, & Friedman (2011) used the household-based survey in three northern districts of Lao People’s Democratic Republic with World Bank's collaboration to investigate the effectiveness of WFP's Food for education scheme in school enrolment. They used the difference-in-difference technique and found that such food transfers schemes slightly increased enrolment. Furthermore, they found that some hurdles like distance to WFP's assisted schools and lack of distributing staff reduced the scheme's effectiveness.

Studies conducted on examining the socio-economic determinants of child labour have reported that poverty, child age, child gender, number of dependent children in a household, parents age, parent’s education, parent’s employment status and other household characteristics are significant determinants of child labour. For example, Nkamleu (2009) carried out a study to investigate the determinants of child schooling and child labour. He used the survey data of 1501 households, and the result was estimated using a Multinomial Logit model. He divided children activities into four categories; child school only, child work only, child school and work, and idle child. His results showed that child gender and child age significantly impact child school only, and school and work. In some other studies, child age has been found in negative correlation with child labour. For example, Khan (2008) used the data of 4000 households for both urban and rural areas of Pakistan and found that school enrolment of male and female children is positively associated with their ages. He also reported that boys' probability of school

enrolment is more than girls' school enrolment with an increase in their ages. The household head's education level has a significant and negative impact on part-time and full-time child

labour supply. Ota and Moffat (2006) used the cross-sectional data from 101 households to investigate the determinants of child labour in four districts of rural Andhra Pradesh, India. They employed the simple Probit model, and their results showed that children's age and gender are the essential determinants of schooling.
Furthermore, they found that the probability of male children's schooling was more than that of female children, which widens with an increase in age. In the same way, Household income status and age of the household head have a significant impact on children's schooling decision. Moreover, parents' education had no significant impact on child schooling. Haile and Haile (2007) carried out a study to investigate the determinants of work participation and school attendance for children 7-15 years of age using Rural Ethiopia survey data. A bivariate probit model was used to analyse the trade-off between two households' decision about their children, i.e. work and school. They found that male children are more likely to attend school as compared to female children. They also found that female children were having a higher probability of domestic chores while males were having a higher probability of participation in market work.
Moreover, while male children were more likely to combine schooling with market work, females were more likely to combine schooling with household chores. Besides, other household characteristics such as large family size and the number of dependents increase the probability of combining schooling with work. While education of the household head increases the possibility of child school participation and working many hours was found to decrease the possibility of school attendance of working children.

3. Methods and Procedures

3.1 Theoretical Framework

The trade-off between child labour and child schooling can be explained in the context of demand for child schooling and supply of child labour by a household. We assume that parents are rational, i.e. the demand for child schooling and supply child labour is based on cost-benefit analysis. In poor subsistence households, parents cannot educate their children; instead, they send them to the labour market to support their families' subsistence consumption (Hanushek, 1986; Schultz, 1988; Adelman et al. 2008; Qaiser et al., 2021). Parents decide to invest in a child's education when expected future benefits of education exceed current education costs. Educational costs include direct costs (school fees, stationeries, books, uniforms, transportation cost) and indirect costs or opportunity costs. The opportunity cost of child education is the forgone (labour) activity for schooling. Instead of going to school, a child can work at a family farm or at a business firm to support family consumption. The poor households must have some kind of incentives to be compensated for both direct and indirect costs of schooling to send their children to schools instead of the labour market. Incentives like school meals and take-home ration may compensate poor households for costs of schooling. However, these incentives should cover direct costs and opportunity cost resulting from the loss of labour income due to school enrolment. For example, if a program does not compensate households for the current costs, parents may decide to engage their children in full time or part-time labour activities (Adelman et al. 2008; Bundy et al. 2009; He, 2009, Cheung & Perrotta, 2009; Rafique et al., 2020). Thus, to attain highest human capital, FFE programs should cover both direct and indirect cost of schooling (Adelman et al. 2008; Bundy et al. 2009; He, 2009; Dereze and Kingdon, 2001; Elahi et al., 2021).

Food for Education (FFE) program usually takes two forms: school meals and takehome provisions. School meals provide a stronger incentive conditional on enrolment, and take-home rations work as a non-labour source of income, compensating the household for the foregone labour income that might be earned by the child if not being present at the school (Pollitt, 1995). Increment in household's total income keeps the children in school and expected to reduce the household supply of child labour (Asif and Zahid, 2019; Balhotra and Heady, 2003; Baez and Camacho, 2011; Kazianga et al. 2012).

Considering all the above arguments, let subscript 'i' denotes the child, and 'j' denotes the adult, and 'h' denotes the household in question. The household demand for child schooling (DLC) is

the function of the price of child schooling (PL_i) and household income (Y_h). While, household's total income is equal to adult labour wage income (W_j), plus non-labour income (Y_n) of the household.

$$DL_i = f(PL_i, Y_h) \quad (1)$$

While the non-labour income of household (Y_n) contains income other than wages, nonlabour income includes rent, profit and interest etc.

$$Y_h = W_j + Y_n \quad (2)$$

Now by the price of schooling, we mean the direct and indirect costs of schooling. The direct cost includes the cost of schooling (S_i), i.e. tuition fee, books cost, uniform cost. The indirect cost of schooling is the opportunity cost of schooling, i.e. the child's wage income (W_i) forgone by the household.

$$PL_i = S_i + W_i \quad (3)$$

As WFP's intervened schools have no direct cost of schooling (Si), price of Child schooling (PLi) is equal to the wage income (Wi) forgone by the child for schooling, and that FFE transfers (F) must cover the opportunity cost of child labour (Wi) forgone to increase demand for child schooling.

Thus, the household's demand for child schooling (DLC) mainly depends upon FFE transfers (F) and total household income (Y_h). Demand for child schooling (DL_i) increases as FFE transfers (F) increase and household's total income increases. Equation (3) has been modified to equation (4)

$$now \quad PL_i = W_i \qquad while\ F = W_i \quad (4)$$

$$Thus \quad PL_i = F \quad (5)$$

$$DL_i = f(F, Y_h) \quad (6)$$

$$\frac{\partial DL_i}{\partial F} > 0 \quad (6.1)$$

$$\frac{\partial DL_i}{\partial Y_h} > 0 \quad (6.2)$$

However, the child labour supply (N_i) by the household is just the opposite of a household's demand for child schooling. For instance, when a household's demand for child schooling increase, their supply of child labour reduces. The child labour supply is the function of child wage rate (W_i) and household income (Y_h).

$$N_i = f(W_i, Y_h) \quad (7)$$

As FFE transfers (F) are equal to the opportunity cost of child schooling (W_i), thus child labour supply (N_i) is the function of FFE transfers (F) and total household income (Y_h).
Child labour supply reduces with increase in FFE transfers and Household total income. Thus child labour supply function (7) is changed to (8).

$$N_i = f(F, Y_h) \quad (8)$$

$$\frac{\partial N_i}{\partial F} < 0 \quad (8.1)$$

$$\frac{\partial N_i}{\partial Y_h} < 0 \quad (8.2)$$

The household's demand for child schooling and supply of child labour mainly determined by FFE transfers (F), and household income (Y_h).
This program may have increased demand for child schooling (DL_i), and the supply of child labour (N_i) by the household may reduce.

$$\frac{\partial DL_i}{\partial F} > 0 \quad \frac{\partial N_i}{\partial F} < 0 \quad (9)$$

3.2 Empirical Model

The empirical model has been constructed based on the theoretical framework and existing literature. Subscripts 'i' denotes children, 'j' denotes adult, and 'h' denotes household in the below equation.

$$Y_i = \alpha_0 + \alpha_1 F_i + \alpha_2 X1_i + \alpha_3 X2_j + \alpha_4 X3_h + \alpha_5 X4_j + \alpha_6 X5_j + \alpha_7 X6_h + \varepsilon \quad (11)$$

Table 1 Definition of Dependent and Independent Variables

Variable Name with Code and Brief explanation	Nature of Variable	Type of variable
Y_i = Children Activities, Y_i = y_1, y_2, y_3		
y_1 = Child goes to school only	Dependent	Nominal
y_2 = Child goes to(market) work only	Dependent	Nominal
y_3 = Child in household chores	Dependent (reference category)	Nominal
$F1_i$ = FFE intervened age (proxy for FFE)		
1= 5-10 Years (FFE Intervened Age group)	Main Independent	Nominal
2= 11-16 Years (FFE non intervened/controlled group)	Main Independent	Nominal
$X1_i$= Gender of the respective children		
0= Female	Independent	Nominal
1= Male	Independent	Nominal
$X2_j$ = Log of child non-labour income	Independent	Continuous
$X3_j$= Father Age (in years)	Independent	Continuous
$X4_j$ = Mother Age (in years)	Independent	Continuous

$X5_h$ = number of children below 5 years in a household	Independent	Continuous

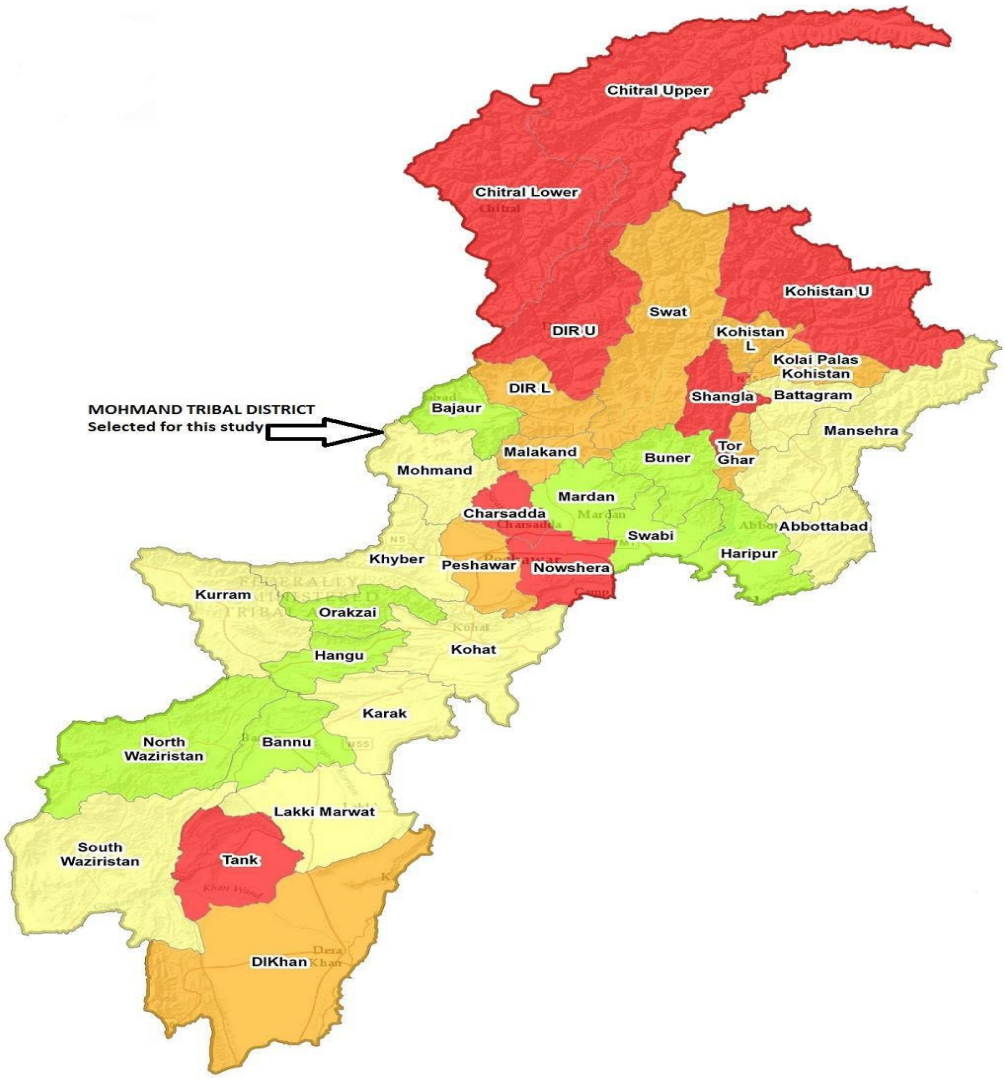
3.3 Estimation Technique

The Classical Linear Regression Model (CLRM) critical assumption is that the dependent variable must be continuous for fitting a model. It cannot treat the dichotomous or categorical dependent variable. In case, the dependent variable has two outcomes, we use Logit or Probit model, but when the dependent variable has more than two outcomes, the outcomes of the dependent variables are exclusive and exhaustive, multinomial logit model is used (Nkamleu, 2009). Following Nkamleu (2009), the Multinomial Logit model has been used to analyse the socio-economic determinants of child labour and schooling among rural households in the study area. Unlike multivariate logit or probit models, the multinomial logit has numerous possible states or categories that are j = 1, 2, 3 ...n. (Cramer, 1991). Because the multinomial logit model does not treat the dependent variable categories in any continuous order, as it is different from sequential logit /probit models (Amemiya, 1981), in this study, the dependent variable has threenominal categories, j= 1, 2, 3. Multinomial logit model allows probabilities 'Pis' to events characterised as "ith child jth category". To estimate this model, there is a need to normalise one category, referred to as the "reference category". The reference category chosen for this study is the household chores activity of the child.

3.4 Data

The study's universe is the households having at least one school-going child in KP's tribal districts. However, it was impossible to survey the entire districts due to its geographical spread, security threats and limited resources and time. Further, all tribal districts share similar socio-economic characteristics, thus sampling from any district may represent the entire population of the tribal districts. For this purpose, a sample size on 427 children was obtained surveying 136 households in district Mohmand using a purposive sampling technique (refer to Map 1). The primary data is cross-sectional including children characteristics, parents' characteristics and household characteristics

Map 1. Mohmand Tribal district, KP, Pakistan



4. Results and Discussions

4.1 Descriptive Analysis

Table 1 shows that most of the fathers are illiterate, and a minimum number of fathers has the highest qualification, i.e., M.Phil./Ph.D. Moreover, being educated, the maximum number of fathers has a matric level of education. Similarly, 17.6% of total fathers are unemployed, while 59.5% are wage workers, and 23% are self-employed. Thus most of the fathers are wage workers in the study area. Taking mother's education into consideration, it was found that out of total mothers are, 89.7% are illiterate. Only 6.1 % of out of total mothers have primary level education, and less than 1% has middle and bachelor level of education. No mother was found educated above the Bachelor level in the study area. Employment profile of mothers showed that 89.2% of mothers are unemployed. Mothers are mostly engaged in managing household chores in the study area. However, only 4.4% of mothers are wage workers, and 6.3% are self-employed.

Table 2: Frequency Distribution of Parent's Characteristics

Variables	Frequency	Percentage
Education Level of Father		
Illiterate	170	39.8
Primary	51	11.9
Middle	56	13.1
Matric	71	16.6
Intermediate	21	4.9

Bachelor	38	8.9
Master	18	4.2
M.phil/Ph.D	2	0.5
Employment Status of Father		
Unemployed	75	17.6
Wage Worker	254	59.5
Self-employed	98	23.0
Education Level of Mother		
Illiterate	383	89.7
Primary	26	6.1
Middle	2	0.5
Matric	7	1.6
Intermediate	5	1.2
Bachelor	4	0.9
Employment Status of Mother		
Unemployed	381	89.2
Wage Worker	19	4.4
Self Employed	27	6.3

Source: Author's estimation

Table 2 shows the prevalence of children in different activities. It was found that 24.8% of children have engaged in school only activity out of the total. The children who participate in full time paid work is reported to be 13.8% of the total sample size. While the children participated in full time, unpaid work was reported to be 8.4%, and those combine school with paid work were reported to be only 0.2%. Children combine school with unpaid work, were reported to be 49.9%. The undesirable choice of households for their children is the idle category; children found in this category were 8.4%. Table 2 also shows the prevalence of children in different activities on gender basis. It is shown that, out of the total sample size, 39.3% were female children, while 60.7% were male children.

Table 3: Frequency Distribution of Child Characteristics

Variables	Frequency	Percentage
Children Activities of 5-16 years of age		
Schooling	319	72.2
Labour	68	15.4
Household Chores	40	9.0
Child Gender		
Female	168	39.3
Male	259	60.7

Source: Author's estimation

4.2 Multinomial Logit Regression Analysis

We have interpreted the results presented in table 3 in terms of odds ratiofor schooling and labour categories of the dependent variable, while household chore was taken as the reference category in this model. The value of the odds ratio above 1 shows a positive association; the

value of less than 1 indicates negative and value equal to 1, showing no association between predictor and response variables.

Results show that the FFE intervened age group coefficient positively and significantly impacts child schooling activity. It is shown that relative to household chores, achild belongs toFFE intervened age group are more likely to be engaged in schooling than a child ofcontrolled (5-16 years' child) age group with a significant odds ratio of 4.388.Results also showed that children of FFE intervened age group are less likely to be in labour activities than controlled age group with a significant odds ratio of 0. 213. Thus it is evident that the FFE intervened age group is less likely to be engaged in labour activity, indicating the program's effectiveness in the study area. However, this is also evident that child age by itself a strong determinant of child labour. For example, Ota et al. (2006) and Nkamaleu (2009) showed that parents prefer labour activity more for their elder kids. Another reason less prevalence into labour activity of FFE intervened age group is that there is no direct cost of schooling (tuition fee, book charges, transportation cost etc.) and program transfers are sufficient to cover the indirect cost (see the theoretical framework of this study).

Besides the FFE program, several significant socio-economic factors might affect program effectiveness. These factors, including children characteristics, parents'characteristics and household characteristics, were analysed in this study. For instance, female children are less likely to be engaged in both schooling and labour activities than those of their male counterparts with a significant odds ratio of 0.204 and 0.58, respectively. It indicates that households in the study area prefer both activities more for their male children. It also indicates that the FFE program could not address gender discrimination in schooling effectively in the study area. Child nonlabour income (household income other than child income) is the household economic indicator. Household income plays a vital role in determining child schooling and child labour (Asif et al., 2021; Webbink et al. 2012; Ota and Moffat, 2006). For example, child non-labour income has a significant positive impact on child schooling and significant negative impact on child labour with an odds ratio of 3.678, respectively.Parents' age has a negative but insignificant impact on child schoolingbut has a significantimpact on the response variable's child labour category. For example, father age has a negative significant while mother age has a significant positive effect on child labour with odds ratio of 0.936 and 1.188, respectively.

Similarly, the increase in significantly negatively impacted years of age in a household has a negative but insignificant effect on child schooling.Simultaneously, an increase in the number of children below five years in a household increases the likelihood of children (5-16 years of age), involvement in labour activities significantly with an odds ratio of 1.195. Generally, as the number of dependent members in a household increases, the expenditures and need for more income. Consequently, more children from such families are engaged in child labour activities (Kondylis and Manacorda, 2012).

Table 4: Estimated Multinomial Logit Coefficients of socio-economic determinants of child activities

Categories of Dependent Variable	Explanatory Variables	β	Sig.	Exp(β)	95%CI for Exp(β)	
					Lower Bound	Upper Bound
Child Schooling	FFE Intervened Age Group	1.479	.000	4.388	2.061	9.342
	Child Gender (Female)	-1.588	.000	.204	.090	.462
	Log of Child Non-labour Income	1.302	.025	3.678	1.176	11.502
	Father Age	-.038	.200	.962	.908	1.020
	Mother Age	-.013	.753	.987	.910	1.071
	No. of children below 5 years.	-.237	.189	.789	.553	1.124
	FFE Intervened Age Group	-1.547	.012	.213	.064	.714

Child Labour	Child Gender (female)	-2.856	.000	.058	.019	.174
	Log of Child Non-labour income	-4.781	.000	.008	.001	.082
	Father Age	-.067	.034	.936	.880	.995
	Mother Age	.173	.007	1.188	1.049	1.347
	No. of children below five years	.669	.011	1.952	1.168	3.263

Household chores have been taken as a reference category of the dependent variable. Source: Author's estimation

5 Conclusion

This study aims to analyse the role of WFP's,Food for Education (FFE)programs in reducing child labour and increasing school enrollment in KP's tribal districts. A sample size of 427 children from 136 households was obtained using a purposive sampling technique from tribal district Mohmand. Data were analysed using descriptive analysis and multinomial logit technique. FFE transfers are distributed equally amongstprimary school-going children. Therefore, the 5-10 year's age group was taken as a proxy for FFE and the primary explanatory variablefor this study.

In contrast, the school children's 11-16 years' age group was taken for comparison. This study shows that the FFE program iseffective in increasing school enrolment and reducingthe incidence of child labour amongst the intervened child age group. Other important socio-economic determinants, such as the child's gender, child'snon-labour incomeparents' age, and having children below five years' age in a household, weresignificant factors forchild schooling the incidence of child labour.This study recommends that to address the issue of child labour completely in the economically backward tribal districts, middle and high school students should also be included in the FFE program of WFP.

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