Effect of COVID-19 Pandemic on Child Labour: A Case Study of Pakistan

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Abstract

The issue of child labour and its consequences on developing economies during COVID-19 is significant to debate as the problem has hurt children the most in the current situation. Due to the Pandemic, children suffer more as many families face loss of lives, reduced livelihood, and economic opportunities. Children participating in the labour force belonging South Asian countries will face a surplus of Child Labour due to COVID-19 in the coming years.To the best of our knowledge, no such studies have considered the issue in hand. The study has worked on a "special survey evaluating the Socio-Economic Impact of COVID-19 on the well-being of people" published by the Pakistan Bureau of Statistics. This study focuses on seeing the consequences of COVID-19 on the labour market, especially child labour. The analysis reveals overwhelming findings. It is suggested that the government should provide parenting support to help families on the verge of entering into poverty as COVID-19 has affected the income-generating opportunities. Further, it is recommended to coordinate with all the key players of the institutions to cover the problem of food security, child protection, and child anti-trafficking problems as these are the significant problems that children are facing. Moreover, Job opportunities should be created to facilitate youth employment; those near reaching their legal age to work should be included in the focused group to prevent child labour.

Keywords: *Child labour, informal sector, wage differential, unemployment, cash assistance.*

JEL classification: *J14, E26, J31, E24, H84.*

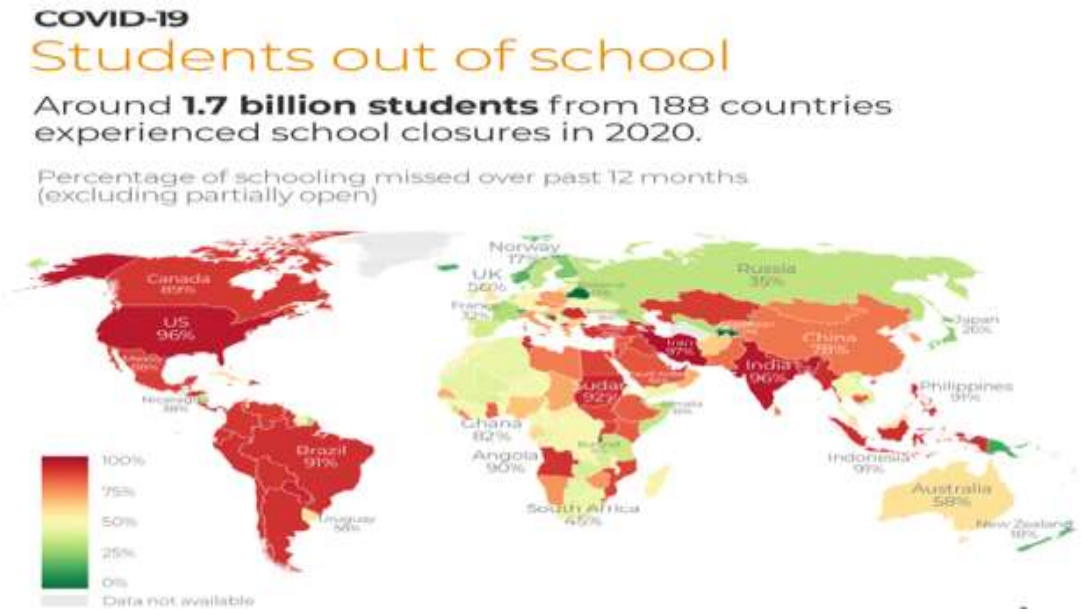
Introduction

The issue of child labour and its consequences on developing economies during COVID-19 is significant to debate as the problem has hurt children the most in the current situation. Although the Pandemic has hit globally, it has created many more issues for children. Across the globe, children have faced many psychological and economic problems. Due to restricted movement and socialization, children faced much more problems. They mainly socialize through schools; this Pandemic has reduced children's social activities. Schools are not only a source of learning for children but also let them mingle with the same age. Some researchers highlighted the problems of the children belonging to underprivileged families in COVID-19 as the closer of school let them forgo the social and economic benefits of the school system provided in public schools by the government, such as providing free meals during school hours (Owusu, et.al.2020). In many countries, public schools and educational institutions which the government manages feed students or compensate them in cash to encourage them to join studies, specifically children of low-income families. Unfortunately, such crises create more problems for impoverished families, pushing them further into poverty (Kaur, et.al. 2021). Due to the Pandemic, children suffer more as many families face loss of lives, reduced livelihood, and economic opportunities. Children participating in the labour force in South Asian countries such as Bangladesh, India, Nepal and Pakistan will face a surplus of Child Labour due to COVID-19 (Progga, et.al.2020).

The closure of educational institutions, especially in rural and underdeveloped areas, and the family's socio-economic condition strained these children to go to work. The Pandemic not only creates chaos in the working class due to strict lockdown, which took their livelihood, but it also pushes them to relocate from one place to another for the sake of earnings as many people belonging to the working-class and daily wagers lose their source of earnings in these challenging times. The lockdown imposed by the government forced migrant workers to return to their hometowns as it was hard for them to survive in the cities during this challenging time. Most of the migrants were laid off from their jobs or were temporarily suspended during this Pandemic, which increased financial pressure, especially on low-income households. Hence, their children were employed in paid market work by paying the dropout penalty (Rajan, et.al, 2020). Although different countries announce relief and rehabilitation packages to put the curb

on the consequences of COVID-19 and to reduce its disastrous impact on the masses as much as possible, nevertheless they all focus on economic restoration, none of those policies works on the food and nutritional security of children who were dependent on the food supplements provided by the government-run school. (Alvi, et.al, 2020). Due to the closure of refugee schools, children from Syria, Rohingya, Afghanistan, and the Democratic Republic of Congo (DRC) may remain uneducated, exacerbating poverty in the future (Watkins and Jameel, 2020). Disrupted education can lead to further poverty and vulnerability in the long run. Education access protects most children from child marriage and child labour. Owing to the closure of schools and decline in family income, there are higher chances of increased child labour and child marriage (ASI, 2020: 11). The Pandemic may expand poverty by causing a loss of livelihoods. Many families will be urged to marry their daughters early as it is predicted that nearly 4 million girls are at risk of child marriage due to school closure (World Vision cited in Batha, 2020). Another cause of child labour may be migration during crises, as it is expected that this will cause more harm than benefit. It is anticipated that all such circumstances will result in an increased risk of child marriage, increased child labour, and a higher number of teenage pregnancies (CEPAL, NU, 2020). UN expected that child labour would eradicate by 2025. Hence, achieving set target 8.7 of SDG would be hazardous due to COVID-19.

Figure 1.



Source: UNISCO.sgdev.org February 2020 – February 2021

Children participating in the labour force belonging to South Asian countries such as Bangladesh, India, Nepal and Pakistan will face a surplus of child labour due to COVID-19 (Progga, et.al.2020). It is estimated that about 16.7 million children are working as the child labour ranging between the age group from 5 to 17 (Idris, I 2020). In many cases, it has been seen that the children of migrated families contribute more to child labour (Daly, et.al.2021). According to ILO studies, the provision of better social services and investment in schooling can reduce child labour in developing countries, which can benefit more than it cost. The fundamental birth-right of every child is to obtain an education. Unfortunately, child labour takes away this right from the children. The consequences and impact of child labour bring along the stunted growth of future generations, which in the long run creates hurdles in developing the country's economy (Ramteke, 2020).

Child labour is connected to adult wage levels, adult unemployment rate, and the size of society's informal and agricultural sectors (Fatima, A.2017). COVID-19 has impacted child labour in agriculture in several ways. Due to the Pandemic, movement and gathering of people were restricted, which strained many families to employ their children as unpaid family workers. Most of the children were employed in the agriculture sector due to economic hardships faced by small farm holders. Compared to adults, children were less affected by Coronavirus infection; henceforth, the responsibilities of family survival lie on their shoulders. Compared to children of urban areas, children in rural areas do not have access to radio or the internet, hence remote learning becomes challenging for them. Therefore, children at home who were not involved in any learning process were likely to become part of labour force. In the informal sector, there would be a large supply of unskilled workers due to fewer job opportunities. Therefore, wages will be suppressed, and most of the children will be employed in agriculture. Due to COVID-19 child labour in the Ivory Coast and Ghana may increase cocoa production. Cocoa farmers were also infected, affecting their work; their children were occupied in cocoa farms for family survival. School closures caused most children to be retained in harmful work. Mid-season harvesting requires high labour, and the Pandemic occurred in the said season; therefore, more children were hired for harvesting. It is also analyzed that child labour increases due to an unexpected decline in household income or earning opportunities (ECLT 2020, Moore 2020, Peyton 2020 and of International Cocoa Initiative 2020). Keeping in mind the situation of labour market and the expected inflow of child labour in coming years, the core purpose of this study is

to evaluate the impact of COVID-19 on child labour. This study focuses on seeing the consequences of COVID-19 on the labour market, especially for child labour. Being a developing economy, Pakistan, like any other country, worked very hard and tried to curtail the after-effects of the Pandemic. For this, the Government of Pakistan took many initiatives, imposing a lockdown to restrict the movement and halt the spread of the Pandemic is one among them. On the one hand, by imposing the lockdown, the government tried to curb the spread of COVID-19; on the other hand, this step took away the source of earnings from the working class employed on daily wages or small workers categories (such as casual paid employee, informal workers and others). This shock created a considerable impact to quiver the struggling economies like Pakistan. For this study, we keep the focus on the expected rise in child labour. The literature fails to provide an in-depth analysis of the effect of labour market conditions on child labour incidence. There is a dire need to explore the effect of demand and supply side indicators of child labour. Hence, we have tried to compare and contrast the pre and post-COVID-19 conditions, specifically for child labour market perspective.

This study is further divided into four parts; the first part covers the impact of Covid-1 on child labour, study's seconds part consists the theoretical foundation. A descriptive assessment is presented in the third part, which is further bifurcated into two parts: child labour supply and demand. Lastly, the study is concluded with the inclusion of some policy recommendations.

Impact of COVID-19 on Child Labour

It is identified by Anti-Slavery International (ASI, 2020) that COVID-19 Pandemic has negatively impacted modern slavery, and human trafficking and child labour is a form of modern slavery. The global economic downturn will increase the rates of child labour and child marriage due to COVID-19 crisis. (Human Rights Watch (HRW), 2020:6). Researchers have analyzed that child labour is caused when families undergo financial shock, job loss due to illness or disability of any earning member, or due to parent's unemployment. Since many families do not have savings for rough financial periods or are not financially stable, therefore, income loss and without government support, their children are at higher risk of entering into the labour market so that they could share the economic burden of their families. This highlighting is echoed by De Hoop and Edmonds (2020): "*Child labour will be an important coping mechanism for poor households experiencing COVID-related shocks.*" They also warned the consequences of child

labour that would increase and could last generations; these children may acquire minimum education and have worse employment opportunities when they become adults, and they may also suffer from chronic health issues and mental stress.

As compared to other countries, South Asia has a high prevalence of child labour in the world, and around 16.7 million children (age 5 -17) of South Asia are engaged in child labour (ILO, 2014). In 2020, the predicted economic growth of this region was 6.3%, declining from 1.8% to 2.8%. The entire region could face negative growth in the worst-case scenario. Most of the South Asian countries depend on remittances, but the COVID-19 crisis has reduced remittances. Although, in low and middle-income countries, remittances help to alleviate poverty, and improve nutrition, are spent on higher education to reduce child labour in deprived households. Therefore, a decline in remittances will reduce family expenditures in these areas. As a result, child labour will increase. Due to increased unemployment stemming from COVID-19 Pandemic, remittances sent by migrant workers across the globe declined by USD 110 million last year. (Inman, 2020)

It was pointed out by Shaikh (2020) that in South Asia, the informal economy chugged without any significant disruptions in previous economic downturns. It would be difficult in the current Pandemic, as informal workers are mostly affected in countries vulnerable to economic and labour market shocks. Due to COVID-19 Pandemic, informal workers are affected by income loss or unemployment, declined access to health care due to increased vulnerability to the virus, minimum support by the government, and limited access to social protection. Informal workers enter vicious circles of poverty due to unemployment and other socio-economic factors. Kundu (2020) recognizes that the unemployment rate in urban regions of India was 8.21%, and it raised to 30.9% in mid-March 2020 due to the Pandemic. It was estimated that around 400 million informal workers will not return to their livelihoods for long period; therefore, most households will be urged to put their children in the labour market.

Moreover, due to inadequate savings for challenging financial periods, lack of support from the government and other socio-economic factors may increase child labor, especially in poor-income households. The effects of the disruption of global supply chains and lockdown were highlighted by Burns et al, (2020) for Bangladesh. Around 87% of informal workers in the garment and leather industry were employed before the Pandemic. Over one million workers were laid off or temporarily suspended in March 2020. In South and Southeast Asia, a similar

crisis was faced by the garment sector, especially in India and Myanmar (ASI, 2020: 6). It was reported by Bangladesh Garment Manufacturers and Exporters Association (BGMEA) that due to cancellation/suspensions of orders in early April, 1,082 factories had tackled the loss of USD 3 billion (Nazalya, 2020). The Consortium for Street Children (CSC) explains the impact of the Pandemic on street vendors and waste collectors of Bangladesh that they could not earn money due to the lockdown; hence they entered into the vicious circle of poverty.

It is cautioned by Watkins and Jameel (2020) that the closure of schools would leave some children illiterate and will widen inequalities. Due to the closure of refugee schools, children of Syria, Rohingya, Afghanistan, and the Democratic Republic of Congo (DRC) may remain uneducated, and school closure will exacerbate poverty in the future. COVID-19 impacted child labour in agriculture in several ways. Most agricultural products are seasonal and perishable. One of the consequences of the upsurge in child labour is due to financial crises or large-scale epidemics, as families come under financial pressure because of unemployment of earning family members, and loss in household income which exacerbates poverty, especially in lower-income families. It is evident from past epidemics that low-income families face unemployment or earn lower wages. Due to the purchase of cheaper and less nutritious food, weight loss and malnutrition, especially in younger children and pregnant women. School fees and other educational expenditures (textbooks cost, uniforms, transportation cost, etc.) become unaffordable for low-income families. Hence they are urged to employ their children in labour market to share economic burden of the household. Further, their chance of acquiring formal education ends up. (UNICEF, 2009: 3)

In West Africa, the Ebola virus outbreak occurred between 2014 and 2016, first discovered in 1976. This Pandemic hit Guinea, Liberia and Sierra Leone. Korkoyah and Wreh (2015) found that average pre-Ebola employment for both males and females was 81.0%, which declined to 43.7%, while the average pre-Ebola unemployment rate was 18.8% tripled to 56.2% after the Pandemic. Due to one or both parents' deaths, most children were left in economic and socially unstable conditions. UNICEF reported that only 4,128 children became orphaned due to this disease in Liberia. In Liberia, children were deprived of education, and their social vulnerability deepened due to school closure for a whole academic year. In these countries practice of child marriage was most prevalent. Due to the absence of interventions in orphan protection, orphan

girls were at significant risk of sexual exploitation and abuse, while orphan boys either worked in a hazardous environment or were employed as street hawkers or became petty thieves.

The global economic crisis of 2007-08 led to increasing child labour, its effects were analyzed by Stavrapoulou and Jones (2013). Child labour was common in Nigeria; girls and young women from poor households became the victims of this crisis. Most of the girls of poor households were employed as child labour to fulfill the household's basic necessities. Five-year-old children were involved in agriculture, retailed goods in markets, or became apprentices to traders in rural Nigeria. Due to the hike in food prices, girls were more involved in paid work than boys, especially in states that were less dependent on agriculture. In El Salvador, children aged 10-16 dropped from school and joined the labour force to support their families. Since the children worked for long hours in the market, their total workload also increased. Girls of urban Nicaragua helped their mothers in domestic and market work to earn additional income. Progress was being made to reduce child labour in Brazil and Ecuador, but the financial crisis sharply slowed this progress.

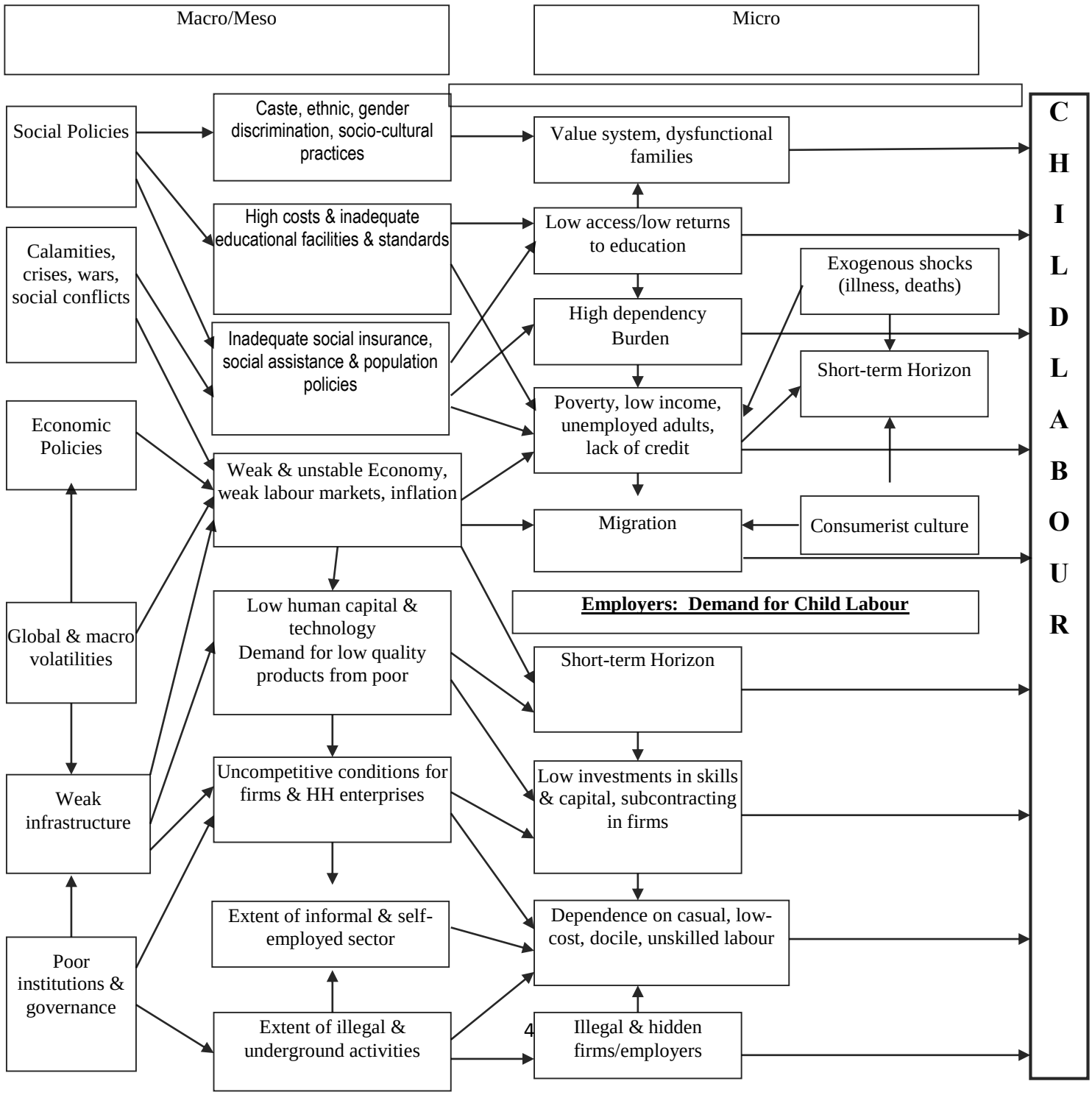
Theoretical Foundation

Theoretical foundation of this paper is based on Lim's study (2002) and it is further divided into macro/meso and micro levels. Further, the supply and demand side indicators of child labour are explained in detail at the micro level. At the macro level, social policies give rise to caste, gender discrimination, and socio-cultural practices that cause dysfunctionality in families, giving rise to child labour. Social policies and disasters primarily affect children's education due to inadequate facilities. Further, the cost of education, insufficient social assurance, etc., also affects their education. Social policies and calamities push families into vicious circles of poverty due to lower access to education, a higher number of dependents, lower household income, unemployment of adults in the household, and death or illness of a family member leads to increase child labour. Weak economic policies, feeble governance, and poor institutions affect the demand and supply of child labour. Form the supply side, lower access to education, higher dependency ratio, lower household income, unemployment of adults, and migration are factors to consider. Migration is a consumerist culture as most families migrate to urban areas due to diversified employment opportunities of rudimentary services. Unemployment of adults, low access to education, lower household income, and other socio-economic factors urge poor

migrated families to employ their children in labour market. On the other hand, the demand for child labour increases due to dependence on causal, low-cost, docile, unskill labour, lower investment in training skills and capital, illegal and hidden firms/employers.

Flow chart discusses supply and demand indicators of child labour and factors affecting it.

Flow Chart 1
Effect of Socio-Economic Factors on Child Labour



Model Specification and Data Sources

Due to this Pandemic, nearly 42 million children are not attending school, around 17 million children below the age of five have missed their vaccination or are at risk due to delay in vaccination, and around 12 million children have become malnourished and stunned. Children are at higher risk and are most vulnerable due to discontinuation of education, lack of learning opportunities, and food insecurity, which results in malnutrition, loss of jobs of household earners, or loss in household income, giving rise to child labour. Therefore, policies to eradicate child labour and provide food assistance to vulnerable people should be among the government's priorities. (http://covid.gov.pk/stats/pakistan)

To estimate the determinants of child labour before and after Pandemic the model is formularized as:

$$CL_i = \alpha_0 + \alpha_1 PC + \alpha_2 SDC + \alpha_3 LM + \varepsilon_0 \quad (1)$$

Where the subscript i represents children employed in the labour market before and after the Pandemic.

CL represents child labour, and it is used as a dependent variable. It is defined as economically active children of age 5-17 years. PC, SDC and LM are independent variables representing personal, socio-demographic characteristics and labour market conditions of employed children. The number of female children, their age and education are used as Personal characteristics. Average years of adult education, household income is used as socio-demographic characteristics. The unemployment rate, wage differential are used as labour market conditions. Data of this study is gathered from a special survey conducted by the Pakistan Bureau of Statistics to evaluate socio-economic impact on well-being of people. This survey is designed for the period before, during, and after the lockdown.

Methodology

Analysis of the probit model is based on the cumulative normal probability distribution. Probit analysis provides statistically significant findings for which demographics increase or decrease the probability of dependent variable. In this study, child labour is taken as the dependent variable; employed children are given the value of 1 and children who are not part of the labour

force are given the value of 0. In equation (2) the probability pi of choosing any alternative over not choosing can be expressed as:

$$p_{i=}\, prob[Y_i = 1|X] = \int_{-\infty}^{x_i'/\beta} (2\pi)^{-\frac{1}{2}}\ \exp(\frac{-t^2}{2})\, dt \quad \text{_____ (2)}$$
$$= \emptyset(x_i'\beta)$$

The marginal effect is interpreted as the relationship between a specific variable and the probability outcome, which accounts for the partial change in the probability. By holding the other variables constant, a marginal effect associated with continuous explanatory variables Xk on the probability $P(Yi\ = 1|X)$ can be derived as:

$$\frac{\partial p_i}{\partial x_{ik}} = \emptyset(x_i'\beta)\beta_k \text{ _____ (3)}$$

The probability density function of a standard normal variable is represented by $\emptyset$. The marginal effect on dummy variables are estimated differently from continuous variables, while discrete changes in the predicted probabilities constitute an alternative to the marginal effect when evaluating the influence of a dummy variable. This effect is derived from equation (4)

$$\Delta = \emptyset(\bar{x}\,\beta, d = 1) - \emptyset((\bar{x}\,\beta, d = 0) \text{ _____ (4)}$$

This paper focuses on factors that influence child labour from the demand and supply sides. Unemployment rates, wage differential, proxy of the informal sector are demand-side indicators. Supply-side indicators are child's age, gender and education, household income, average years of adult education. The determinants of child labour are also explored before and after the lockdown in this study.

Results

This section is divided into two parts, i.e. demand and supply indicators of child labour and empirical assessment of child labour..

Supply Side Indicators

Wages of household earners, lower access to education, employment status of other household earners, shocks of the Pandemic on household expenditures are the factors that drive poor and vulnerable families to employ their children in the labour force.

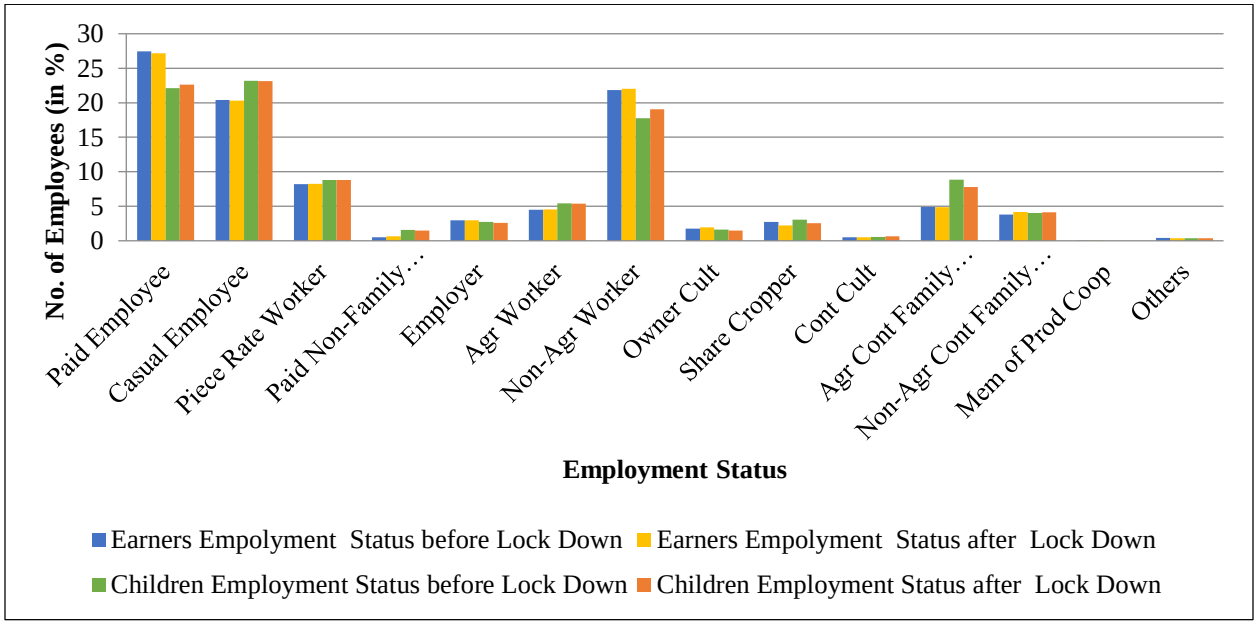
Employment Status Before and After COVID-19

Figure 1 shows the employment status of children and adults of the household before and after the lockdown. The percentage of children employed as own-account non-agriculture workers and contributing non-agriculture family workers increased after the Pandemic. In contrast, the

percentage of adults employed as regular paid employees share and contributing agriculture family workers has declined after the Pandemic.

Figure 1

Employment Status of Children and Adults before and after COVID-19



Source: Author's estimation from PBS COVID-19 data

Employed and Unemployed Individuals Before, During and After Lockdown

Table 1 (a) and (b) show the percentage of employed and unemployed adults and children before, during, and after the Pandemic. A higher number of children were removed from domestic/local jobs, whereas a higher number of adults were removed from foreign jobs during the Pandemic. 17.66% of Children were not allowed to work during the Pandemic, while only 0.13% of adults were not allowed to work during Pandemic, as some adults opted for secondary jobs or worked from home during the lockdown. (Table 1 (a) and (b))

Table 1 (a)

Employed and Unemployed Children and Adults (in %) Before and After Lock-Down

	Before Lock Down	After Lock Down
% of Employed Children	17.16	16.11
% of Unemployed Children	82.84	83.89
% of Employed Adults	35.21	33.51
% of Unemployed Adults	64.79	66.49

Source: Author's own estimation from PBS COVID-19 data

Table 1 (b)

Employed and Unemployed Children and Adults (in %) During Lock-Down

	% of Employed Children	**% of Unemployed Children**	**% of Employed Adults**	**% of Unemployed Adults**
same status as before	42.35	**99.58**	**38.84**	99.20
yes, reduced working hours/days but same salary	4.61	-	4.8	-
yes, reduced working hours/days and reduced salary	10.19	-	11.96	-
yes, on paid leave	1.33	-	0.03	-
no, on unpaid leave	1.21	-	1.08	-
no, removed from job(domestic/local)	2.73	-	1.84	-
no, removed from job (foreign)	0.06	-	2.20	-
not allowed to work (lock down)	17.66	0.01	0.13	0.01
no work due to covid-19	19.84	-	18.57	0.02
yes, just started working	-	0.41	20.54	0.78

Source: Author's estimation from PBS COVID-19 data

Table 2 (a) and (b) exhibited the percentage of employed and unemployed adults and children before and after the Pandemic across region and provinces. The percentage of employed children was higher in both regions of GB, whereas the percentage of employed adults was higher in rural GB and urban Balochistan before and after the Pandemic. On the other hand, the percentage of unemployed children was higher in rural and urban KPK, whereas the percentage of unemployed adults was higher in both regions of AJK before and after the Pandemic.

Table 2 (a)

Employed and Unemployed Children (in %) by Region and Province

		Before Lock Down		**After Lock Down**	
		% of Employed Children	% of Unemployed Children	% of Employed Children	% of Unemployed Children
Rural	KPK	9.46	90.54	9.28	90.72
	Punjab	16.15	83.85	15.57	84.43
	Sindh	24.49	75.51	19.57	80.43

		Before Lock Down		After Lock Down	
		% of Employed Children	% of Unemployed Children	% of Employed Children	% of Unemployed Children
	Balochistan	18.78	81.22	20.59	79.41
	Gilgit Baltistan	28.42	71.58	29.47	70.53
	Azad Jammu & Kashmir	13.04	86.96	10.37	89.63
Urban	KPK	8.33	91.67	8.09	91.91
	Punjab	15.41	84.59	14.54	85.46
	Sindh	19.47	80.53	18.15	81.85
	Balochistan	19.86	80.14	19.98	80.02
	Gilgit Baltistan	25.41	74.59	21.89	78.11
	Azad Jammu & Kashmir	17.01	82.99	17.35	82.65

Source: Author's estimation from PBS COVID-19 data

Table 2 (b)

Employed and Unemployed Adults (in %) by Region and Province

		Before Lock Down		After Lock Down	
Region	Province	% of Employed Adults	% of Unemployed Adults	% of Employed Adults	% of Unemployed Adults
Rural	KPK	35.6	64.4	33.84	66.16
	Punjab	38.27	61.73	36.99	63.01
	Sindh	38.49	61.51	31.41	68.59
	Balochistan	29.42	70.58	32.86	67.14
	Gilgit Baltistan	51.65	48.35	50.55	49.45
	Azad Jammu & Kashmir	23.11	76.89	19.48	80.52
Urban	KPK	35.15	64.85	34.08	65.92
	Punjab	37.80	62.20	35.79	64.21
	Sindh	36.09	63.91	33.93	66.07
	Balochistan	28.94	71.06	30.94	69.06
	Gilgit Baltistan	30.5	69.5	26.55	73.45
	Azad Jammu & Kashmir	21.54	78.46	21.20	78.80

Source: Author's own estimation from PBS COVID-19 data

The percentage of employed and unemployed individuals across different income groups is discussed in detail in table 3 (a and b). The percentage of employed individuals has declined after the lockdown for all income groups except for adults of the second income group. On the other hand, the unemployment rate has increased after the Pandemic for all income groups.

Table 3 (a)

Employed and Unemployed Children and Adults (in %) across Income Groups before Lock-Down

Before Lock Down				
Income Groups	% of Employed Children	% of Unemployed Children	% of Employed Adults	% of Unemployed Adults
Below PKR 17,000	6.22	93.78	33.51	66.49
PKR 17,001 - PKR 36,216	13.92	86.08	35.99	64.01
PKR 36,217 - PKR 64,205	19.07	80.93	35.29	64.71
PKR 64,206 - PKR 108,277	24.11	75.89	35.45	64.55
Above PKR 108,277	25.42	74.58	35.81	64.19

Source: Author's own estimation from PBS COVID-19 data

Table 3 (b)

Employed and Unemployed Children and Adults (in %) across Income Groups after Lock-Down

After Lock Down				
Income Groups	% of Employed Children	% of Unemployed Children	% of Employed Adults	% of Unemployed Adults
Below PKR 15,000	5.07	94.93	27.82	72.18
PKR 15,000 - PKR 32,593	13.32	86.68	36.47	63.53
PKR 32,594 - PKR 59, 616	17.04	82.96	34.03	65.97
PKR 59,617 - PKR 100,555	23.07	76.93	34.20	65.80
Above PKR 100,555	24.32	75.68	34.55	65.55

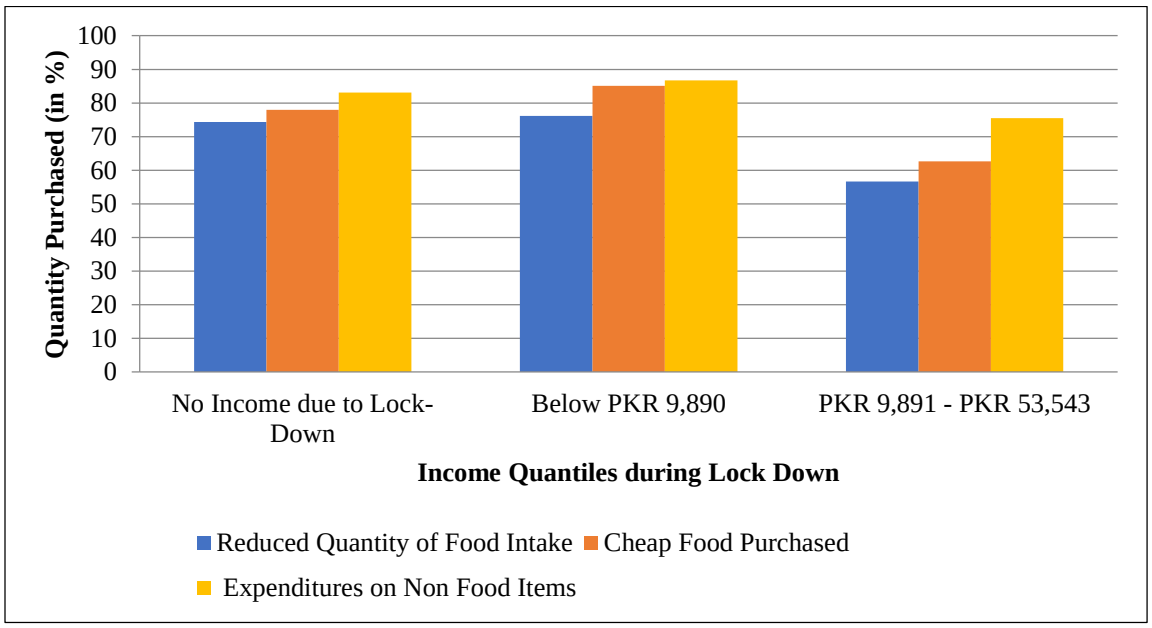
Source: Author's own estimation from PBS COVID-19 data

Tackling of Shocks of COVID-19

During the Pandemic, most household earners lost their jobs; some were temporarily suspended from work and the wages and in some cases, the working hours of few employees were reduced. Informal workers, daily wage earners, and other employees (such as piece rate workers, street vendors) were mainly affected during the lockdown. Hence, low-income families were further pushed into vicious cycles of poverty. Likewise, middle-income and higher-income families also endured financial loss during the Pandemic. Therefore, their expenditures on food and non-food items reduced significantly. Figure 2 and 3 present household expenses (in percentage) on food and non-food items across region and province and for different income groups. Among the income groups, the second income group reduced their expenditure on food and non-food items. Compared to other provinces, rural and urban Punjab's expenditures on food items were condensed during the lockdown, whereas cheap food items were purchased by residents of rural KPK and urban Sindh during the Pandemic. On the other hand, residents of rural and urban AJK reduced their expenditures on non-food items during the Pandemic.

Figure 2

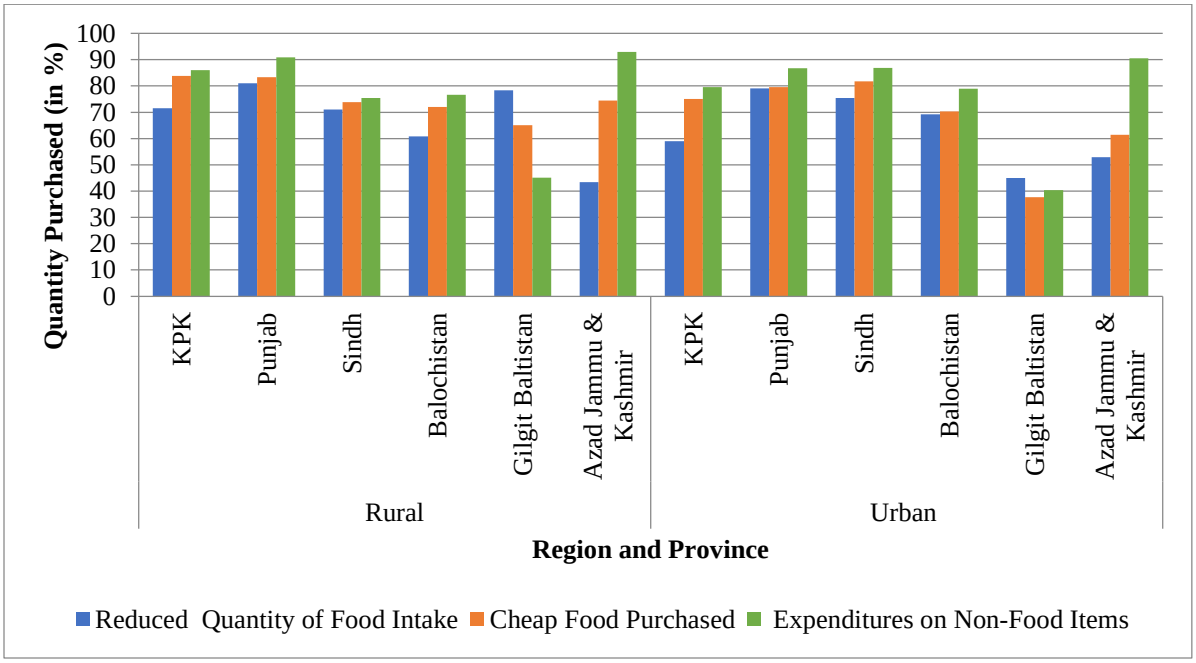
Tackling Shocks of COVID-19 on Food and Non-Food Expenditures by Income Group



Source: Author's estimation from PBS COVID-19 data

Figure 3

Tackling Shocks of COVID-19 on Food and Non-Food Expenditures by Region and Province



Source: Author's estimation from PBS COVID-19 data

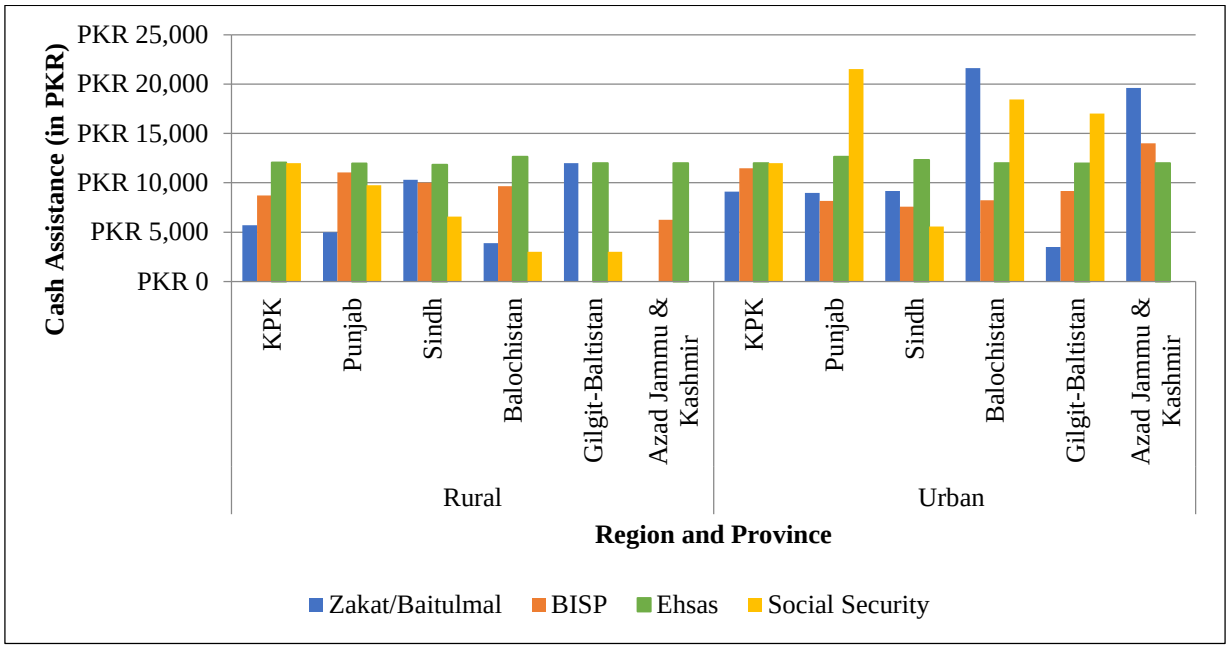
Assistance from Social Protection Programs

During the Pandemic, the Government of Pakistan initiated Ehsas Emergency Cash Program to assist poor, unemployed, lower-wage people and individuals who were fired from their jobs or did not get a salary due to the lockdown. Most households who suffered financial loss during the lockdown got assistance from the government, NGOs, and Islamic organizations during and after the Pandemic. Further, their friends and relatives supported households in tackling harrowing financial crises.

In figure 4 and 5 represents the cash provided to households by different social protection programs is presented across region and provinces and various income groups. During the lockdown, residents of rural Balochistan acquired a higher amount through the Ehsas program, and residents of urban Balochistan acquired a more significant amount through Zakat/Baitulmal. On the other hand, a higher amount to the second income group by the Ehsas program during the Pandemic.

Figure 4

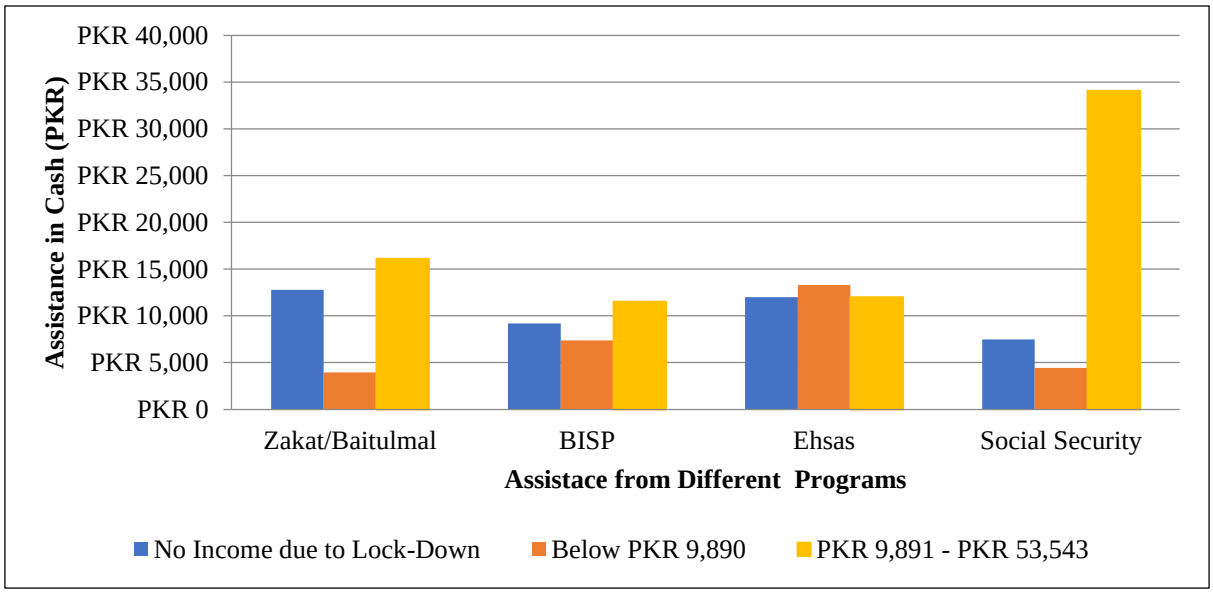
Assistance from Social Protection Programs (in PKR) by Region and Province



Source: Author's estimation from PBS COVID-19 data

Figure 5

Assistance from Social Protection Programs (in PKR) by Income Groups



Source: Author's estimation from PBS COVID-19 data

Demand Side Indicators

The following are crucial factors that increase the demand for child laborr, particularly in the informal sector. Child-Adult wage differential across occupations/industries, employers providing training to the children according to their demand, lower wages offered to them due to no work experience, and lower access to education, children are preferred due to specific characteristics; increase in the proportion of child labour in the total labour force, the proportion of own child in total children employed – reduce the cost of hiring of family worker.

Wage Differential Before, During, and After the Pandemic

Table 4 shows the wage differential across occupations before, during, and after the Pandemic. During the lockdown, most of the employees were not allowed to work or were laid off from their jobs, therefore, wages in most of the occupations did not exist. During the Pandemic, the wages of children in some occupations were higher than adults. However, wage differential has increased or decreased in some occupations after the Pandemic.

Table 4

Wage Differential by Occupation

Occupation	Wage differential before lockdown	Wage differential in lockdown	Wage differential after lockdown
Armed Forces	0	1,574	0
Commissioned Armed Forces Officers	5,750	-	-2,667
Non- Commissioned Armed Forces Officers	21,769	-	20,167
Armed Forces Occupations other Ranks	10,066	-	10,617
Chief Executive, Senior Official and Legislator	26,345	-	24,071
Administrative & Commercial Managers	44,920	-	36,257
Production & Specialized Service Managers	57,945	-	54,132
Hospitality, Retail & Service Managers	43,767	24,500	42,078
Science & Engineering Professionals	18,710	-	16,759
Health Professionals	72,736	-	69,370
Teaching Professionals	20,875	-13,000	19,449
Business & Administration Professionals	59,280	-	69,570
ICT Professionals	26,818	-	38,227
Legal, Social & Cultural Professionals	24,199	-	32,007
Science & Engineering Associate Professionals	21,756	-	21,500
Health Associate Professionals	11,400	17,000	10,551
Business & Administration Associate Professionals	25,868	30,000	27,914
Legal, Social, Cultural and related Associate Professionals	21,500	0	20,397
ICT Technician	17,300	-	17,065

Occupation	Wage differential before lockdown	Wage differential in lockdown	Wage differential after lockdown
General Clerk	21,012	-	22,479
Customer Services Clerk	25,259	13,000	24,102
Numerical and Material recording Clerk	16,198	-	16,863
Other Clerical Support Workers	19,164	16,500	19,045
Personal Service Workers	10,511	6,429	9,777
Sales Worker	12,398	9,167	12,248
Personal Care Workers	19,115	-	19,374
Protective Service Workers	13,467	12,000	16,245
Market Oriented Skilled Agricultural Workers	5,278	10,000	5,033
Market Oriented Skill Fishery, Forestry and Hunting	9,500	15,000	10,697
Sub Farmers, Fishers, Hunters and Gathers	2,827	-100	3,051
Building & related Trade Workers	13,461	-	12,923
Metal, Machinery & related Trade Workers	11,945	1,800	10,917
Handicraft & Printing Workers	5,779	11,000	4,997
Electrical and Electronic Trade workers	14,633	-	12,711
Food Processing, Wood Working, Garment & other Craft & related Trade Workers	9,569	11,136	9,591
Stationary Plant and Machine Operators	16,450	12,000	14,868
Assemblers	19,400	-6,000	16,182
Drivers & Mobile Plant Operators	11,212	8,778	9,659
Cleaners and Helpers	8,056	9,750	7,940
Agricultural, Forestry and Fishery labourers	4,162	-6,333	3,766
Labourers in Mining, Manufacturing, Construction & Transport	8,415	1,763	7,746
Food Preparation Assistants	7,386	-	6,511
Street and related Sales and Service Workers	8,348	7,000	7,647
Refuse Workers & other Elementary Workers	12,022	-	14,164

Source: Author's estimation from PBS COVID-19 data

Empirical Assessment

An empirical assessment of the factors affecting child labour, as discussed in equation (1) is presented in table 5(a) and (b). Determinants of child labour show that with an increase in the age of children, child labour also increases. Since children are preferred due to their specific characteristics, they are flexible, trainable and demand less pay. As the number of female children increases, child labour also increases. Most of the girls assist their mothers as domestic helpers by paying the penalty of not attending school.

In services and agriculture sector, females are employed explicitly as certain activities are only associated to them, such as handicraft, sewing, fancy work and others. Further, they are also engaged in other occupations to share the financial burden of other family members. After the

Pandemic, most household earners either have lost their jobs or household income has declined, which has urged most of the households impoverished and vulnerable to push their children into the workforce. According to marginal effects, a one-unit change in the population of female children increases the probability of being in the labour force by 0.794% before lockdown, and after lockdown, it increases by 0.901%. Some children acquire education besides being engaged in the labour force due to socio-economic conditions of the household. Hence, education has a positive and significant impact on child labour before and after the Pandemic. Average years of adult education is an essential socio-economic factor that affects child labour. As the education level of adults' increases, they may have diversified employment opportunities which lead increase in their wages; therefore, child labour will decline as they will be encouraged to acquire education. In terms of marginal effect, a one-unit change in years of adult education declines the probability of child labour before and after lockdown by 18.8% and 0.35%, respectively. Household income has a positive and negligible impact on child labour. It is also found from the Initiative Cocoa report (2020) that credit-constrained households do not substitute child labour for schooling as they rely on their child income, especially while threatening financial periods. Hence, an increase in household income increases child labour. Across the region, the urban region shows a negative and significant effect on child labour, which suggests that diversified employment opportunities are available for adults, leading to declining child labour. Further, various NGOs', government programs and other organizations also provide financial assistance to poor and vulnerable households, which declines the labour participation of children. Meanwhile, all provinces show positive and significant impact on child labour. Since Pakistan is a developing country and most households were living below the poverty line before the Pandemic, this outbreak has increased the poor population. Although, before Pandemic children of poor and vulnerable families were part of the labour force. After Pandemic, most households have entered into vicious circles of poverty as household earners have also lost their jobs or their salary has reduced, which has caused many families to drag their children into the labour force. Therefore, child labour is higher in some provinces and lower in others depending on the socio-economic conditions of each province's household and labour market condition.

Wage differential has a positive and negligible impact on child labour. An increase in wage differential leads to increased child-labour, as there are certain occupations in which both children and adults are hired. Children are hired due to their specific characteristics, and they

demand lower wage. Therefore, they are hired in specific occupations which lead to an increase in the wage differential. Informal sector requires low skills labour and become regular workers with time. Hence informal sector absorbs the higher proportion as children are quickly employed in this sector as they are unskilled and acquire lower education of children. After lockdown, child labour has increased in the informal sector due to the socio-economic condition of households, in terms of marginal effect, the higher the size of the informal sector, the higher the probability of child labour. Before lockdown probability of child labour was 1.16%, and after lockdown, it increased to 1.34%. A positive and significant relationship exists between the unemployment rate and child labour. As adults of the household become unemployed, then children are pushed towards the labour market. After lockdown, most of the adults lost their jobs which increased the unemployment rate. Hence child labour increased. In terms of marginal effect, the higher the unemployment rate higher will be the child labour. The probability of child labour increased to 5.9 % after lockdown, whereas it was 5.5% before lockdown. Our results are also supported from the study of Fatima (2017). Number of children employed in labour force before pandemic was 30,897 and it has increased to 30,969 after Pandemic.

Table 5 (a)

Determinants of Child Labour before Pandemic

Variables	**Child Employment**	**Marginal Effects**	**Z Value**
Child Characteristics			
Number of female child	0.398	0.00794	7.12***
Children age	0.143	0.0022	13.18***
Children education	0.0544	0.00034	1.62***
Household Characteristics			
Average years of adult education	-0.169	-0.188	-14.43***
Household Income	7.99e-07	1.13e-06	11.14***
Urban Region	-0.270	-	-7.47***
Punjab	0.269	-	4.60***

Variables	**Child Employment**	**Marginal Effects**	**Z Value**
Sindh	0.537	-	9.25***
Balochistan	0.579	-	8.84***
Gilgit-Baltistan	0.862	-	10.17***
Azad Jammu and Kashmir	0.423	-	4.38***
Labour Market Conditions			
Wage Differential	6.09e-05	8.63e-07	13.71***
Proxy for Informal Sector	0.874	0.0116	12.35***
Unemployment Rate	3.858	0.055	13.52***
Constant	-4.026	-	-58.46***
LR chi2(14)	5734.72*		
Observations	30,897		
Pseudo R2	0.4398		

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5 (b)

Determinants of Child Labour after Pandemic

Variables	**Child Employment after lockdown**	**Marginal Effects**	**Z Value**
Child Characteristics			
Number of female child	0.372	0.0091	7.15***
Children age	0.124	0.0023	13.88***
Children education	0.0597	0.00061	2.32***
Household Characteristics			
Average years of adult education	-0.182	-0.0035	-12.05***

Variables	**Child Employment after lockdown**	**Marginal Effects**	**Z Value**
Household Income	8.78e-07	1.98e-08	9.38***
Urban Region	-0.230	-	-6.41***
Punjab	0.287	-	4.99***
Sindh	0.500	-	8.71***
Balochistan	0.536	-	8.38***
Gilgit-Baltistan	0.727	-	8.60***
Azad Jammu and Kashmir	0.454	-	4.80***
Labour Market Conditions			
Wage Differential	6.06e-05	1.07e-06	15.09***
Proxy for Informal Sector	0.803	0.0134	13.38***
Unemployment Rate	3.398	0.059	14.01***
Constant	-3.885	-	-48.88***
LR chi2(14)	5078.64* (0.0000)		
Observations	30,969		
Pseudo R2	0.4090		

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Conclusion and Policy Recommendations

Efforts were put to evaluate the intensity of the problem. Meanwhile, this study has also tried to see the far-reaching effect of the Pandemic, in terms of financial crises. The problem has been considered as modern slavery as this will increase the issue of child labour in the short and long-run (Human Rights Watch (HRW), 2020:6). Most of the children who have entered the labour market are those who were previously engaged in public education and were availing the benefit in terms of cash or kinds from the educational institutions (Owusu, et.al.2020).

In line with the analysis, a few of the policy recommendations are concluded in light of our findings;

- It is suggested that the government should provide some parenting support in terms of material, both in cash or non-food, to help families that are on the verge of entering into poverty, as COVID-19 has affected the income-generating opportunities of such families.
- It is also suggested to provide continuous learning opportunities to the children, especially those who are at risk of dropping out of school and expected to enter child labour. Further, it is recommended to keep a close eye on those who are at- risk of dropping out and engage those children to avoid child labour.
- The government should coordinate with all the key players of the institutions to cover the problem of food security, child protection, and child anti-trafficking problems as these are the significant problems that children are facing.
- Job opportunities should be created to facilitate youth employment. Moreover, those near to reach their legal age to work should be included in the focused group to prevent child labour.

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