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Child Labour in India, 1981: A District Level Analysis

EVERY child has a vital role to play in a society. Children are not only important for the continuation of the society but also for the future prosperity and development of it. Children are assets and every society is expected to create a favourable environment and provide adequate opportunities for a fuller development of the children. The presence of child labour in modern society deviates from this stand, which inhibits and adversely affects proper physical, mental, intellectual and educational development of the children. Child labour can simultaneously be considered as a social, economic and demographic problem. In India, as shown in Table 1, the number of child workers in 1981 is 11.2 million, Compared with the figure of 1961 of 14.5 million child workers there has been a decline in the incidence of child labour in 1971 when the number of child workers was only 10.7 million. This decline of number of child workers in 1971 is mainly due to the change of definition of workers in 1971 census (Srivastava, 197 1). The overall child work participation rate (CWPR), on the other hand, has shown a decline during 1961-71. In 1961, 1971 and 1981 CWPR was 12.69, 7.14 and 6.23 respectively, indicating a sharp decline in the participation rate during the former decade. A similar decline can be observed in the case of percentage of child workers to total workers. In 1981, there was one child worker per 20 adult workers in the country.

TABLE 1 : NUMBER AND PERCENTAGE OF CHILD WORKERS IN INDIA, 1961, 1971 AND 1981

Years	*1961*	7977	*1981*
Number of children in age group 5- 14	113,980,114	150,616,036	179,597,244
Number of child workers	14,469,775	10,753,985	11,192,254
Child work participation rate	12.69	7.14	6.23
Percentage to total workers	7.67	5.97	5.03

SOURCES: *Census of India, 1961, 1971 and 1981 .series- 1, General Economics Tables,* Part III A&B (i).

India is a vast country with diverse socio-economic conditions. An examination of the participation rate and percentage of child workers of 1981 shows that within India there is

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a wide range of variation. Among the states and union territories in 1981, Andhra Pradesh revealed the highest CWPR and percentage of child workers of 12.41 and 7.75 and Lakshadweep revealed the lowest CWPR and percentage of child workers of 0.28 and 0.39. A districtwise analysis indicates that the CWPR is highest (18.71) in Mandla of Madhya Pradesh and lowest in Lakshadweep. The percentage of child workers to total workers also varies from 0.39 in Lakshadweep to 12.00 in Jhabua of Madhya Pradesh.

In India some micro level studies regarding the causes and consequences of child labour have been conducted by Nangia (1987), Dinesh (1988), Singh (1990), and Jodha and Singh (1991). Vemuri (1986) used multivariate analysis for examining child labour over 61 agroclimatic regions of India defined by NSSO. Rosenzweig and Evenson (1977), and Kanbargi and Kulkarni (1986) have studied the fertility, schooling and economic contribution of children in India. Rosenzweig and Evenson carried out their study over 189 districts of India, covering 13 states, whereas Kanbargi and Kulkarni studied districts of Karnataka. But few studies have attempted to answer the question, "what are the important factors influencing child labour in the districts of different states of India ?" For reducing the incidence of child labour, it is necessary to know those factors which are influencing them and which can be affected through systematic plans and programmes.

In the present study, an attempt has been made to examine those factors which are responsible for influencing child labour in the districts of different states of India. In the study, small states and union territories are excluded and we analyse child labour only for the 14 major states (population more than 10 million) in 1981.

Conceptual Framework

A conceptual framework has been developed to study child labour. In the framework we consider four types of variables which are influencing child labour (see Diagram 1). These are demographic, economic, social and developmental variables. Each of these variables is not only having a relationship with child labour but are also interrelated among themselves.

As shown in the conceptual framework, child labour is directly influenced by demographic, social, economic and developmental variables. In addition to this direct relationship, child labour is also indirectly affected by these variables. For example, the demographic variables not only affect child labour directly, but also indirectly through economic, social and developmental variables. The growth of population, mainly due to high rate of fertility, diverts a huge resource to feed the growing mouths which affects the investment for economic development. Many of the relationships shown in the framework are also bidirectional, i.e., demographic variable affects economic variables, and, in turn, economic variables affect demographic variable. We, now, describe the variables included in the framework.

(a) *Demographic Variable*

In order to explain the relationship between demographic variable and child labour, total fertility rate has been considered to be important. According to Mamdani (1972), Caldwell (1976) and Cain (1977), high rather than low fertility was an economically rational

proposition for the parents as children perform a variety of tasks beneficial to their parents. Kanbargi (1986) and Dinesh (1988) in their respective studies noted that child work participation rates were higher among those families who had higher number of siblings. In their studies of the Javanese and Nepalese villages, Nag *et al.* (1978) concluded that the rate of reproduction and net positive economic value of children were positively associated. In most of the developing countries, high growth of population due to high birth rate erodes development resulting in lowering of per capita income. Lower per capita income binds the people in poverty and socio-cultural backwardness. In these societies, people see the child as an additional contributor to the family income. Therefore, with the increase of fertility rate incidence of child labour increases.

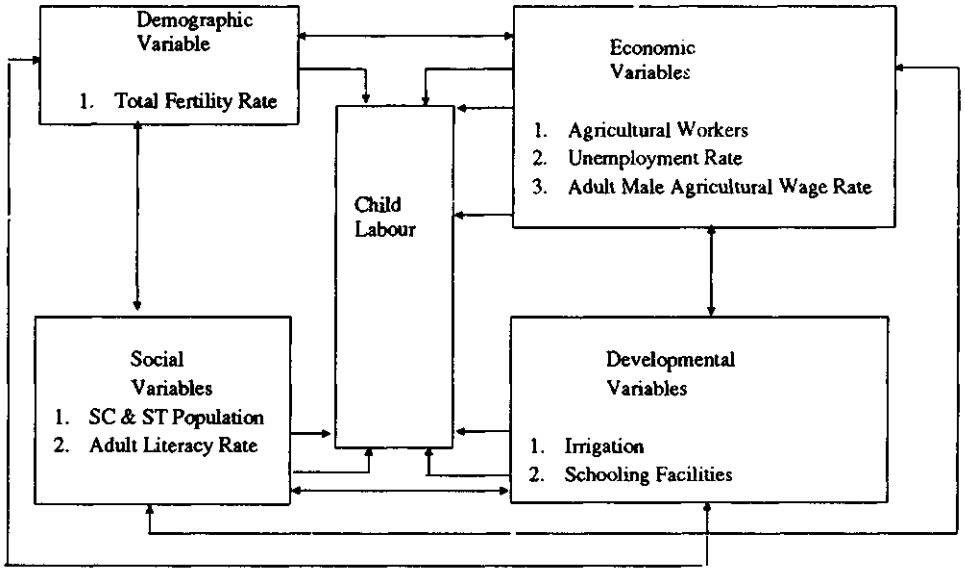

Diagram 1. Conceptual Framework for the Study of Child Labour

(b) *Social Variables*

According to the framework, two social variables, percentage of scheduled castes and tribes (SC & ST) population and adult literacy rates are considered to have an association with child labour. Vemuri (1986) in his study of child labour in India over 61 agro-climate regions showed that the presence of SC in the region increases employment of children. Dinesh (1988) also noticed lower schooling and higher work participation rates among the unprivileged SC & ST population. In fact, in India, most of the people of lower castes are economically and educationally backward. The tribal people who live in the remote parts of the country, particularly in the hilly and forested tracks, are also poor and have little education. Due to socio-economic backwardness, child workers are more frequent in these areas where there is a higher proportion of SC & ST population.

Adult literacy rate also has an impact on child labour. Studies conducted by Institute of Industrial Relations (1988), Institute of Psychological and Educational Research (1985), Dinesh (1988) and, Kanbargi and Kulkarni (1986), found that the educational status of adults or parents or head of the household was closely linked with child labour and schooling of the children. Illiteracy among adults influences child labour in many ways. Firstly, they are not aware about the importance of education of the children. Secondly, when there is high open-unemployment parents are concerned about a little or no return from the investment in children's education. Finally, among these adults both direct costs and indirect costs (with schooling children can not be fully engaged in work) are very high for the schooling of the children. Thus, with illiteracy among adults child labour increases, as illiterate people are more interested to employ their children for earning rather than sending them to school.

(c) *Economic Variables*

Three economic variables associated with child labour — percentage of agricultural workers, unemployment rate and adult male agricultural wage rate are considered in the present study. The incidence of child labour in an agricultural community is usually high. Rodgers and Standing (1981) observed that the highest child activity rates were found in households in which the principal adult workers do agricultural work. According to Nag (1972), the economic value of children to their families was higher in agricultural societies than in industrialised societies. In labour intensive traditional agricultural societies, schooling^of children is less important and the attitude towards children is not like that of the industralised society. During the peak season of sowing and harvesting pf crops, the need for labour encourages parents to engage their children for work. In areas where dependence on agriculture is high, the incidence of child labour is usually rather high.

The less developed countries generally face high rates of unemployment and under-employment. Those persons who work often earn low wages. Salazar (1988) and Chakraborty (1989) have reported that irregular employment and low wages of the adults were closely associated with the incidence of child labour. High unemployment among the adults increases the economic hardship of the people and compels them to send their children to work so as to enhance their family income and, in turn, people become trapped in a vicious cycle as child labour aggravates the situation, depriving the adults from employment. In this way, with higher unemployment rate, the incidence of child labour tends to increase.

Like unemployment, child labour is related with the problem of low wages of the workers. Widespread poverty arising from unemployment and low wages forces people to send their children to work. When adults earn higher wage there is an increase in the standard of living. In that situation people become more aware about the care of the children rather than exploiting them for their economic utility. So, with the increase of adult wage rate we expect the incidence of child labour to reduce.

(d) *Developmental Variables*

Development has an important impact on child labour. With development children are taken care of and society becomes more conscious about the ill-effects of child labour. Here two types of developmental variables have been chosen, i.e., irrigation facilities and schooling facilities. Irrigation is the first step for modernisation of agriculture. Sahu (1990) examined the effect of irrigation in Sambalpur district and found that there was an improve-

ment in earnings of the households with irrigation which affected the incidence of child labour and the schooling rate. In their study of dry regions of Gujarat, Rajasthan and Maharashtra, Jodha and Singh (1991) also showed that lack of irrigation sharply affects child labour. Irrigation helps to ensure crop production along with higher cropping intensity and productivity of crops. Thus, per capita income of the people increases with irrigation which brings a change in socio-economic conditions. The combination of all these effects reduces the economic utility of the children.

Schooling facility is another important variable which has an influence on child labour. This facility helps to bring a qualitative change in human resource which gives a boost to further socio-economic development. The report of the committee on child labour (1979) has mentioned that lack of schooling facilities is responsible for low enrolment rate and high dropout rate among children. In many cases, due to absence of school in the village, it becomes difficult for a child of 5-7 years to go to school on foot, located 4-5 kilometres away from his home. A child who does not go to school, joins work with parents at a very early age. Therefore, the incidence of child labour increases with lower irrigation and schooling facilities.

In the above discussion, it is found that there are some variables which affect child labour and child labour, in turn, may affect those variables also (e.g. fertility, unemployment etc.). But, in this paper, the determinants of child labour are analysed and the reverse relationship is not examined. Before discussing the results, the definition of the variables used in the study are given in Table 2.

TABLE 2 : DEFINITION OF THE VARIABLES

Variables	*Measurement of the Variables*
(i) Dependent Variables	
Y_1 Child work participation rate (CWPR)	Percentage of child workers (below 14 years) to population age 5-14 years.
Y_2 : Percentages Child Woikers (PCW)	Percentage of child workers (below 14 years) to total workers.
(ii) Independent Variables	+
X_1 : Fertility	Total fertility rate (TFR) estimated from 1981 census data on births during last one year by using P/F ratio method.
X_2 : Adult literacy rate	Percentage of literates in age group 20-59 to the total population of that age group.
X_3 .- Schooling facilities	Percentage of villages having schooling facilities to the total number of villages of the district.
X_4 .- SC&ST population	Percentage of SC & ST population to the total population of the district.
X_5 .- Agricultural workers	Percentage of agricultural workers (cultivators and agricultural labourers) to the total workers of the district.
X_6 .- Unemployment rate	Percentage of unemployed persons to total population of the district.
X_7 .- Irrigation facilities	Percentage of net area irrigated to the total net sown area of the district.
X_8 .- Adult male agricultural wage rate	Rupees per day per adult male agricultural workers.

Data

For the selected dependent and independent variables data have been collected from different sources. Data on irrigation facilities and agricultural wage rates of adult males are obtained from *Statistical Abstracts (1982-83)* and *Agricultural Wage in India (1980-81)* respectively. Data for other variables except unemployment rate, have been collected from census publications. Unpublished data on persons unemployed in different districts in 1981 have been provided by the Office of the Registrar General of India. In this study, the relationship of different explanatory variables with child labour is examined by using stepwise multiple regression analysis. To avoid the problem of multicollinearity we have excluded those explanatory variables which are highly correlated and for all India (326 districts of 14 major states) as well as for each state different regression equations have been formed.

Results

In this study, we have measured child labour in terms of child work participation rate (CWPR) and as percentage of child workers to total workers (PCW). We first analyse CWPR for all India and for the 14 major states. For India two regression equations have been formed. As the percentage of agricultural workers (X_5) and adult literacy rate *(X2)* are highly correlated, in the first equation all the variables except percentage of agricultural workers *(X_5)* have been considered and in the second equation, only adult literacy rate (X2) has been excluded. The estimated regression equations for these two different selections are as follows:

$$Y_1 = 24.37 - \underset{(0.016)}{0.16 X_2^*} + \underset{(0.230)}{2.18 X_1^*} - \underset{(0.006)}{0.04 X_7^*} - \underset{(0.037)}{0.20 X_6^*} + \underset{(0.006)}{0.03 X_3^*} - \underset{(0.043)}{0.16 X_8^*} + \underset{(0.013)}{0.04 X_4^*} \quad (1)$$

$$\bar{R}^2 = 0.49 \qquad F = 45.28$$

$$Y_1 = 6.59 + \underset{(0.011)}{0.09 X_5^*} - \underset{(0.007)}{0.04 X_7^*} + \underset{(0.203)}{1.30 X_1^*} - \underset{(0.038)}{0.23 X_6^*} + \underset{(0.013)}{0.06 X_4^*} + \underset{(0.006)}{0.02 X_3^*} - \underset{(0.045)}{0.14 X_8^*} \quad (2)$$

$$\bar{R}^2 = 0.44 \qquad F = 37.45$$

Note: All the figures in the brackets represent the respective values of standard error and '*' refers to significance at 1% level.

The results given in the equations show that all the variables considered in selections 1 and 2 are found to be statistically significant and R^2 in selections 1 and 2 are 0.49 and 0.44 respectively. In India, adult literacy rate *(X_2)* emerges as the most important variable which explains the maximum proportion of variation in the CWPR. The second important variable is the percentage of agricultural workers (X_5) which captures maximum proportion of

remaining variation. The significant variables which are common to both the selections are percentage of net area irrigated (X_7), unemployment rate (X_6), percentage of SC & ST population (X_4), percentage of villages having schooling facilities (X_3), total fertility rate (X_1) and adult male agricultural wage rate *(X_8)*. The regression coefficients of all the variables are statistically significant.

Adult literacy rate, unemployment rate, percentage of net are irrigated and adult male agricultural wage rate are exerting negative influence on child labour. Here, except unemployment rate all the variables reinforce our hypotheses. Percentage of agricultural workers, percentage of SC & ST population, total fertility rate and percentage of villages having schooling facilities are positively influencing child labour. With the exception of percentage of villages having schooling facilities, all the variables support our arguments.

The results of estimated regression equations for CWPR of different selections for the 14 major states are presented in Table 3. It is found that the total fertility rate (X_1) is important in explaining the variation of CWPR in a majority of the states/The exceptions are Andhra Pradesh, Gujarat, Karnataka, Kerala and Uttar Pradesh. Keeping conformity with the findings of Mamdani (1972), Cain (1977), Kanbargi and Kulkarni (1986) and, Dinesh (1988) in all India and in the states of Bihar, Haryana, Maharashtra, Punjab and West Bengal, total fertility rates show a positive impact on child labour. High birth rate associated with poverty increases family size and reduces per capita income and parents are forced to send their children to the labour market at an early age for enhancing family income. However, in the states of Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu, total fertility rates have a negative impact on child labour. Due to the problem of under counting of births in census, total fertility rate has been adjusted through P/F ratio method. However, this adjustment may have some shortcomings for these four states which may be contributing to the erratic result.

Adult literacy rate (X_2) is another important variable. In all the states, except Punjab, the variable is influencing CWPR negatively, supporting our hypothesis. The findings reported in this study are similar with the findings of Kanbargi and Kulkarni (1986), Dinesh (1988) and Singh (1990). Perhaps adults who are literate are more concerned about the education of the children rather than the work.

The percentage of SC & ST population (X_4) is also significant in all the states and all India, except in Andhra Pradesh, Maharashtra, Punjab and Rajasthan. In the states of Bihar, Gujarat, Haryana, Kerala, Karnataka, Madhya Pradesh, Orissa and West Bengal the percentage of SC & ST population is exerting a positive influence on CWPR. In our country, SC & ST population are socio-economically backward in comparison with the rest of the population. More than 50.80 percent of SC & ST population in rural areas, 38.19 percent in urban areas and 48.13 percent in both areas are below the poverty line (Report of the Commissioner for SC & ST, 1980-81 : 41-56). The state of poverty and socio-economic deprivation of the SC & ST population accounts for the high proportion of child workers. Vemuri (1986) and Dinesh (1988) also report similar findings in their study. But in the case of Uttar Pradesh and Tamil Nadu, SC & ST population has a negative impact on CWPR. It is difficult to give a discernible argument for this anomaly and it calls for a more detailed investigation at the micro level in these states.

TABLE 3: SUMMARY RESULTS OF REGRESSION ANALYSES

India States	*Intercept value*	*Regression co-efficient of the variables*								
		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	R^2
Andhra	24.53	-	-0.30*	0.02***	-0.06					0.80
Pradesh	5.77	-	-	-	-	0.12*	-	-0.04	-	0.68
	26.50	-1.78					-2.51*		-0.07	0.68
Bihar	2.36	0.82	-0.16*	0.01	0.12*	_	_	_	_	0.62
	-6.18	1.32	_	0.01	0.06*	0.05	_	-0.02''	-0.31	0.66
	0.42	1.38	_	_	0.05*	_	-0.57**	-0.02	-0.42	0.61
Gujarat	10.54	-		-	0.02	-	-1.37*	-0.07*	-0.21''	0.71
	7.50		-0.11''	0.04	0.04**			-0.07''	0.06	0.67
	5.58	_	_	_	_	0.05''	_	-010*	-0.19''	0.60
Haryama	-21.25	3.58*		_	0.26*	_	_	_	0.08	0.72
	8.86		-0.17*		0.15*					0.90
	-2.25	-	-	-	0.14	0.08	-0.79	-	-	0.66
Kerala	6.18	-0.18	-0.06*	-	-	-	-	-	-	0.44
	1.16	-	-	-	0.08**		-0.02	-	-0.07	0.49
	0.07	-	-		-	0.03''		-0.27		0.33
Kamataka	16.79	_	-0.19*	_	0.10''*	_	_	_	-0.33*	0.73
	-5.67	_		0.08''	0.17*	0.08*	_	_	-0.25''*	0.68
	-0.04	_	-2.04*''	_	0.19*	_	-1.76*	_	-0.24''	0.75
Madhya	18.19	-0.89	-0.12''	-0.08*	0.17*			-0.10''	-0.59	0.68
Pradesh	3.77	-0.88''*		-0.11*	0.16*	0.11		-0.09''		0.75
	12.45			-0.10*	0.20*		-1.72*	-0.10''	-0.97	0.72
Maha-	18.22	1.38	-0.32**	0.03***	_	_	_	-0.09**	-0.16	0.87
rashtra	-14.53	2.21		0.06**	0.10	0.10*		-0.11		0.58
	-20.86	5.97*	_	0.07**	_	_	-0.97	_	_	0.49
Orrisa	33.70	-4.01*	_	—.	_	_	-2.64*	-0.11''*	_	0.77
	23.93	_	-0.40*	_	_	_	_	_	_	0.90
	3.49				0.15*	0.05	-3.05''			0.77
	2.06	_	_	_		0.20''*		_	-1.92''*	0.50
Punjab	-11.89	3.43''	_	_	_		_	0.07	_	0.36
	-8.47	-	-	0.02*	-	0.14''	-	0.04		0.40
	-11.17		0.08		-0.10			0.08	0.56''*	0.27
Rajasthan	23.80	-2.10''	-0.12*	-	-0.03	_	_	-	_	0.30
Tamil	13.06	-3.11''				0.17*		-0.08''		0.50
Nadu	46.32	-3.21*	-0.40	0.03''	-0.31*	_	_	_	_	0.85
	24.91	-1.89''		_	-0.09	_	-2.19*	-0.04''*	_	0.79
Uttar	11.33	_	-0.-6*	_	0.08''*	_	_	-0.06*	_	0.43
Pradesh	10.26				-0.07''*		-1.02*	-0.06		0.43
West	0.84	0.81*		_	-0.04*	0.07*	_	_	-0.01	_	0.69
Bengal	10.08	-	-0.10*	-0.03*	-		-	-	-	0.70
	3.21		-0.02		0.05**	0.05''		-0.03*	-	0.64
India	24.37	2.18*	-0.16*	0.03*	0.04*	_	-0.20*	-0.04*	-0.16*	0.49
	6.59	1.30*	-	0.02	0.06*	009*	-0.23*	-0.04*	-0.14	0.44

Notes : * Refers to significance at 1 percent level,
**** Refers to significance at 5 percent level, and**
***** Refers to significance at 10 percent level**

X_1 : Total fertility rate; X_2 : Adult literacy rate ; X_3 : % of villages having schooling facilities; X_4 : % of SC & ST population; X_5 : % of workers engaged in agriculture; X_6 : Unemployment rate; X_7 : % of net area irrigated; X_8 : Adult male agricultural wage rate.

The percentage of agricultural workers (X_5) exerts its influence on CWPR in all the states except in Rajasthan and Uttar Pradesh. The variable has a consistently positive impact on child labour, supporting our hypothesis. Nag (1972) in his study also showed that agricultural societies have positive influence on child labour. Persons who are solely dependent on agriculture, want to extract all the benefits from agriculture during the cropping season. To meet the huge demand of labour at the peak time of sowing and harvesting people bring their children to work. Agricultural labourers also want to maximise their earnings during the cropping season to compensate the low earnings of lean season. It is to be noted that the question of anti-child labour laws does not arise as most of the rural people are not aware of them and there are no formal appointment in agricultural work.

The unemployment rate (X_6) is statistically significant in explaining the variation of the CWPR in all the states of India except Haryana, Maharashtra, Punjab, Rajasthan and West Bengal. In all India also, the variable is found significant. But contrary to our *a priori* argument, in all the cases, the variable is showing negative impact on child labour. This may be due to the decline in wage rate in the face of unemployment and as a consequence adult labour may be available for work at a lower wage rate. Since the ability to work of an adult labour is greater than the child labour, an adult labour is preferred to a child labourer. The negative impact of unemployment on child labour may reflect the substitution of adult labour for child labour.

Adult agricultural wage rate (X_8) is another variable which emerges as a significant ^yariable that explains the variation in CWPR in the states of Andhra Pradesh, Bihar, Gujarat, Karnataka, Madhya Pradesh, Orissa and Punjab. In all India also, the variable is significant, (in Maharashtra and Uttar Pradesh the data on agricultural wage rate were not available for majority of the districts.) In our study adult male agricultural wage rate shows a negative impact on child labour in all the cases except in Punjab. When agricultural wage is very low the economic condition of the people who are dependent on it is grave and parents are forced to introduce their children to the labour market as a survival strategy. But higher agricultural wage helps to improve the standard of living which in turn discourages parents to send their children to labour market. The anomaly in Punjab may be for a different reason. In Punjab, during the peak season of cultivation there is shortage of labour. In fact, the heavy demand of labour is met by migrant labourers who are attracted by higher agricultural wage rate. These migrant labourers move with their families and all the members of the family including children participate in work. The positive regression coefficient suggests that children are drawn into the work force, but to what extent they are nonmigrant and migrant children is difficult to establish.

Percentage of net area irrigated to net sown area (X_7) is important in most of the states except in Haryana, Kerala, Karnataka, Punjab and Rajasthan. (In Kerala data on irrigation were not available.) In India also, the variable is statistically significant. In all the states and in India without any exception, as hypothesised by us irrigation has a negative influence on CWPR. In this respect our findings are similar with the studies of Sahu (1990) and, Jodha and Singh (1991). In the better irrigated areas agricultural production is not the 'capricious gamble of monsoon'. Ensured crop production, high cropping intensity along with high productivity yields high per capita income. Being economically better off parents discourage their children to join in workforce.

TABLE 3: SUMMARY RESULTS OF REGRESSION ANALYSES

India States	*Intercept value*	*Regression co-efficient of the variables*								
		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	R^2
Andhra	24.53		-0.30*	0.02*"	-0.06					0.80
Pradesh	5.77	_	_	_	_	0.12*	_	-0.04	_	0.68
	26.50	-1.78	-	-	-	-	-2.51*	-	-0.07	0.68
Bihar	2.36	0.82	-0.16*	0.01	0.12*					0.62
	-6.18	1.32		0.01	0.06*	0.05		-0.02"	-0.31	0.66
	0.42	1.38	_	_	0.05*	_	-0.57"	-0.02	-0.42	0.61
Gujarat	10.54	_	_	_	0.02	_	-1.37*	-0.07*	-0.21"	0.71
	7.50		-0.11**	0.04	0.04**			-0.07**	0.06	0.67
	5.58	_	_	_	_	0.05"	_	-010*	-0.19"	0.60
Haryama	-21.25	3.58*	-	-	0.26*	-	-	_	0.08	0.72
	8.86	-	-0.17*	-	0.15*	-	-	-	-	0.90
	-2.25	-	-	-	0.14	0.08	-0.79	-	-	0.66
Kerala	6.18	-0.18	-0.06*	_	_	_	-	_	-	0.44
	1.16	-		-	0.08**		-0.02	_	-0.07	0.49
	0.07	-	-			0.03**		-0.27		0.33
Karnataka	16.79	_	-0.19*	_	0.10"*	_	_	_	-0.33*	0.73
	-5.67			0.08**	0.17*	0.08*			-0.25***	0.68
	-0.04	_	-2.04*"	_	0.19*	_	-1.76*	_	-0.24"	0.75
Madhya	18.19	-0.89	-0.12"	-0.08*	0.17*			-0.10"	-0.59	0.68
Pradesh	3.77	-0.88*"		-0.11*	0.16*	0.11		-0.09**		0.75
	12.45			-0.10*	0.20*		-1.72*	-0.10**	-0.97	0.72
Maha-	18.22	1.38	-0.32"	0.03*"	_	_	_	-0.09"	-0.16	0.87
rashtra	-14.53	2.21		0.06"	0.10	0.10*		-0.11		0.58
	-20.86	5.97*	_	0.07"	_	_	-0.97	_	_	0.49
Orrisa	33.70	-4.01*	_	_	–	–	-2.64*	-0.11***	_	0.77
	23.93	_	-0.40*	_	_	_		_	_	0.90
	3.49				0.15*	0.05	-3.05"	–		0.77
	2.06	_	_	_	_	0.20"*	_	_	-1.92"*	0.50
Punjab	-11.89	3.43**	-	-	-	-	-	0.07	-	0.36
	-8.47			0.02*		0.14"		0.04		0.40
	-11.17	_	0.08	_	-0.10	_	_	0.08	0.56"*	0.27
Rajasthan	23.80	-2.10**	-0.12*	_	-0.03	_	_	_	-	0.30
Tamil	13.06	-3.11**				0.17*		-0.08**		0.50
Nadu	46.32	-3.21*	-0.40	0.03**	-0.31*					0.85
	24.91	-1.89"		_	-0.09	_	-2.19*	-0.04***	_	0.79
Uttar	11.33	_	-0.-6*	_	0.08***	_	_	-0.06*	_	0.43
Pradesh	10.26	_	_	_	-0.07***	_	-1.02*	-0.06	_	0.43
West	0.84	0.81*	_	-0.04*	0.07*	_	_	-0.01	_	0.69
Bengal	10.08	_	-0.10*	-0.03*	_	_	_	_	_	0.70
	3.21		-0.02		0.05**	0.05"		-0.03*		0.64
India	24.37	2.18*	-0.16*	0.03*	0.04*	_	-0.20*	-0.04*	-0.16*	0.49
	6.59	1.30*	-	0.02	0.06*	009*	-0.23*	-0.04*	-0.14	0.44

Notes: * Refers to significance at 1 percent level,
** Refers to significance at 5 percent level, and
*** Refers to significance at 10 percent level

X_1: Total fertility rate; X_2: Adult literacy rate; X_3: % of villages having schooling facilities;
X_4: % of SC & ST population; X_5 : % of workers engaged in agriculture; X_6: Unemployment rate; X_7 : % of net area irrigated; Xs : Adult male agricultural wage rate.

TABLE 4 : SUMMARY RESULTS OF THE REGRESSION ANALYSES

States	*Intercept value*	*Regression Coefficients of the variables*								R^2
		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	
1	*2*	*3*	*4*	5	*6*	*7*	*8*	*9*	*W*	*11*
Andhra	13.25		-0.15*	0.01***	-			-	-	0.81
Pradesh	4.84	-	-	-	-	0.06	-003*			0.72
	11.13	-	-	-	-	-	-1.55*	-0.03	-	0.77
Bihar	2.45	0.93*	-0.10*	_	0.06*	-	-	-	-0.22**	0.66
	-4.79	1.20*	-	-	0.05*	0.04*		-0.02*	-0.20**	0.62
	0.16	1.19*	-	-	0.04**	-	-0.06**	-0.02**	-0.26**	0.57
Gujarat	7.97	-	-0.12*	0.04***	0.02**	-	-	-0.05*	-	0.73
	3.41	-	-	-	-	0.05*		-0.06*	-0.10	0.59
	5.91	0.55	-	-	-	-	-1.05*	-0.06*	-0.16*	0.71*
Haiyana	21.86	3.84*	-	-	0.22*	-	-	-	0.08	0.71
	10.29	-	-0.22	-0.01	0.13*	-	-0.94***	-	-	0.90
	-0.34	-	-	-	-.	0.10*	-0.93***	-	-	0.68
Kerala	5.76	0.11	-0.05*	_	-	-	-0.01	-	-	0.57
	-0.26	0.20	-	0.01	0.08**	-	-0.01	-	-0.07	0.49
	0.87	0.17		_	0.06	0.01	-0.02		-0.07	0.30
Kamataka	1.25	1.47**	-0.12*	0.04**	0.06***	_	_	-	-	0.84
	-10.36	1.34***	-	0.06	0.10*	0.06*		-	-	0.77
	-5.28	2.57*	-	-	0.12*	-	-1.16*	-	-	0.76
Madhya	9.23	-	-0.07**	-0.03**	0.09*	-	-	-	-0.48***	0.70
Pradesh	2.62	-	-	-0.04*	0.09*	0.06*	-	-	-0.38	0.75
	7.83	-	-	-0.03*	0.11*	-	-0.80*	-	-0.45***	0.71
Maha-	12.19	0.08	-0.21*	0.03**	-	-	-	-0.06*	-	0.88
rashtra	-8.86	1.20	-	0.05*	0.08***	0.07*		-0.08***	-	0.61
	-13.80	3.88*	-	0.05**	-	-	-0.60	-	-	0.49
Orissa	22.10	-2.25**	-	_	_	-	-1.94*	-0.09***	-	0.70
	17.52		-0.28*			-				0.92
	2.98	-		-	0.09*	0.04	-1.98***	-	-	0.61
Punjab	-8.14	2.10*	-	-	-0.03	-	-	-0.05*	0.16***	0.79
	4.60	-	-	-	-0.06**	-	-1.92*	-	0.27**	0.63
	0.06	-	-	-	-0.04**	0.11*	-1.65*	-	-	0.87
Rajasthan	8.60	-	-0.07**	-	-	-	-0.10	-0.42	-	0.24
Tamil	19.40	-0.57***	-0.19*	0.01**	-0.14*	-	-	-	-	0.89
Nadu	1.50		-	-	-	0.08*	-	-0.04**	-	0.55
	8.59	-	-	-	-	-	-1.04*	-0.03**	-	0.79
Uttar	9.21	-	-0.07*	-	-0.06**	-	-	-0.03*	-	0.52
Pradesh	3.65	0.64**	-	-	-0.05***	-	-0.65*	-0.03*	-	0.42
West	-2.40	1.57*	-	-0.02***	0.05*	-	-	-	-0.24**	0.84
Bengal	9.29	-	-0.10*	-0.02*	0.02	-	-	-0.01***	-	0.89
	1.68	-		-	-	0.05*	-	-0.03*	-	0.72
India	13.65	0.87*	-0.11*	0.02*	0.03*	-	-0.10*	-0.02*	-0.06*	0.56
	1.87	0.26**	-	0.01*	0.04*	0.06*	-0.13*	-0.03*	-0.05*	0.49

Notes : * Refers to significance at 1 percent level,
** refers to significance at 5 percent level, and
*** refers to significance at 10 percent level

XI : Total fertility rate; X2 : Adult literacy rate; X3 : % of villages having schooling facilities; X4 : % of SC & ST population; X5 : % of workers engaged in agriculture; X6 : Unemployment rate; X7 : % of net area irrigated; X8 : Adult male agricultural wage rate.

Percentage of villages having schooling facilities (X_3) is significant in all the states and in all India, except Bihar, Gujarat, Haryana, Kerala, Punjab, Rajasthan and Uttar Pradesh. B ut only in the states of Madhya Pradesh and West Bengal the variable has a negative impact on child labour. The presence of school in the village is expected to influence child labour negatively by increasing enrolment of the children in the school. However, in the states of Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu and in all India schooling facilities in the village have positive impact on CWPR. In our study only the presence of the school in the village has been considered. In India, there are lot of schools in the country side which do not have basic infrastructure like permanent building, furniture and blackboard, and schools where there is only one teacher. In most of the rural places the school presents a drab and dismal picture and holds little attraction for the child (Report of the Committee on Child Labour, 1979). It has not been possible to consider the distance of the school and the average population served by it. If these conditions of the school are considered, the result might be different.

As mentioned earlier, we have also examined child labour in terms of percentage of child workers to total workers (PCW). The results of the regression analysis for PCW are given in Table 4. These results are more or less the same as in the case of CWPR. This was expected as PCW and CWPR are highly correlated: the correlation coefficient between the two dependent variables for all India is 0.94.

To sum up, the results of multiple regression analyses indicate that the most important variable that explains the maximum amount of variation in the CWPR and PCW in the majority of the states and for all India is adult literacy rate. If parents are literate, there is a tendency among them to encourage their children to attend school rather than sending them for work. Other variables that are important are percentage of agricultural workers and percentage of SC & ST population indicating a need for general economic development and upliftment of the weaker section of the population. While these variables explain child labour in India, there may be other variables which may also capture the incidence of child labour. For example, poverty levels prevailing in each district are perhaps better related to child labour. Unfortunately, we have not included this variable due to nonavailability of data. There are also some other variables which we could have considered in the analysis but data are readily not available.

There are other limitations of the study. The discussion in this paper is entirely based on aggregate data provided by secondary sources. Aggregate data can not capture the. inner dynamics of the entire process and micro level variations within a district are averaged out.

Conclusion

While the main thrust of our study is to identify the important determinants of child labour, from our analysis we can also derive certain policy recipes to combat child labour. The problem of child labour should not be treated in isolation but should be considered within the general complexity of socio-economic and demographic phenomena. It is well known that poverty is the main cause of child labour. But exploitation of child labour should not be allowed to continue generation after generation until the poverty is eradicated. It is

possible to protect children through different economic and social strategies along with poverty eradication programmes.

A major social policy regarding child labour is that the adults of the country should be made conscious about the benefits of education. Hence, emphasis should be given not only on the education of the children but also on the education of their parents. This requires greater initiative on adult education programmes. The SC & ST population are educationally backward and economically deprived. So, in order to reduce child labour, improvement of socio-economic conditions of these weaker sections is required.

The pressure on agriculture should be reduced by shifting the dependence from agriculture to non-agricultural sectors. Moreover, Indian agriculture is overtly dependent on monsoon. Therefore, irrigation facilities should be improved to increase the productivity in agriculture and wage rate. An increase in the income level of the families dependent on agriculture may reduce the economic dependence of parents on children.

The demographic policy regrading child labour should be to control population. So far in India, for the control of population only the demographic aspects have been emphasized whereas little importance is attached to nondemographic factors such as improvement of mother and child's health and nutrition.

In order to decrease the incidence of child labour, education of the children needs to be improved. We can only emphasize this by suggesting that education should be made more attractive for children. Incentives in the form of scholarships, free books and nutritious meals can form the package to improve the attendance in schools. These incentives will raise the literacy level, on the one hand, and reduce the extent of the child labour, on the other.

To tolerate child labour is neither morally justifiable nor a good social policy. If poor social policies perpetuate the system of child labour, the most fundamental object of a human society which is protection and nurturing of its young would be lost and the quality of future human resources would be squandered. This waste is awful, because future economic and social development is contingent on the quality of human resources.

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