



# AN EMPIRICAL STUDY OF DETERMINANTS OF CHILD LABOUR IN ODISHA

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Article DOI: <https://doi.org/10.36713/epra16127>

DOI No: 10.36713/epra16127

## -----ABSTRACT-----

*The objective of the study is to analyse the child labour in Odisha-A conceptual and descriptive, income determinants of child labour and their participation in the workforce at an early age in Khurdha district of Odisha on the basis of primary data. The regression results reveal that family income has significant negative impact on the working hour of the child labour. Family size is a non-economic factor which affect the working hour of child labour significantly. Children's desire to work has a positive and significant influence on employment of working Children. Child labours are from poor and larger families who are forced to join labour force to supplement the family income. The regression coefficients of physical condition are negative and coefficient of all other variables is positive. Age of becoming child labour is a significant variable. Higher the age of child labour, higher is the income of child labour.*

**KEYWORDS:** *Age, Child Labour, Family Size, Income, Poverty, Work, Wage.* -----

## INTRODUCTION

Child labour is a universal problem. There are number of factors for this problem. Poverty, illiteracy and social traditions are the main causes of child labour. But poverty is the pivotal among them. The families below poverty line have no other alternatives than to bend their minor children to work for their survival. In poor families almost all family members have to work and especially the children are treated as the additional sources of income. As a result, they are sent to work even in most hazardous factories or organizations. Most shocking in the fact that, a child labour gets less remuneration in comparison to an adult worker, even though both are doing the same work. The employers prefer the child laborers. The industrial revolution cannot reduce the percentage of child laborers as the mortality rate reduced considerably. With the passage of civilization, it is shameful to see the children are working for livelihood and for the economic benefit of their families. It is needless to mention here that the children acquire the skills in the process of working in factories and industries and become an expert when they become adults. The tragic thing is that, instead of working with the families. The children are sent to factories, mines and mills to work for the capitalists or owners who are least both and about the wellbeing of these deprived ones. They do not get the opportunities for education and remain as the disadvantaged group for the whole lives. Since, the primary study was conducted in the district of Khurdha, hence it is essential to describe the socio – economic background of the area.

## LITERATURE REVIEW

There are plethora of Literature on child labour in india. Some relevant literature are reviewed. Dulera (2020) described the major reasons of child labour was such as the annoyance of poverty, lack of education, Societal and financial backwardness, addiction, lure of inexpensive labour, Family tradition. Kim et al (2020) identified that child labours in India comprises the large number of children in any single nation in the globe. In 2011, approximately 12 million children among the ages of 6 and 17 were main workers as per Census Report. In this study, we use the ILO,s methodology to define hazardousness and combine it with the most recent UNICEF,,s time thresholds for economic work and household chores.

Nanda et al (2019) explain the magnitudes, causes & consequence of child labour and measures taken by the government to abolish child labour in Odisha state. From the time of independence, India has committed itself to be against child labour. The article is an attempt has been made to analyse the status of child labours as well as other labours in Odisha. Recognition of the area of focus of child labour and assessments of dimensions of the



issue has been made. Dilip R. Khairnar (2017) observed that nearly 78.60% of child labourers are minor in the stage collection of 9-14 ages. The family income of 88% of families of child labour is limited to 1000-2000 rupees per annum. It is also shocking that as well as 67% of minor workers are homeless, 44% of workers belong to diverted families. Only 35% of child labourers are living with their parents. The study also shows that 87% children are in nutritional deficiency 33% of child labourers are survived by taking only one meal a day. The situation of child labourers in worse who belong the family addicted to alcohol and Tabaco. Because of poor economic conditions of the family, 39% children are forced to work as a child labourer. Most of the child labourers are found working in garages, bricks, factories, hotels etc. The study shows the remedies of child labour like force education, creating awareness and successful execution, creating awareness and successful execution of the acts. The working hour of the child labour is more than 12hours, maximum of them are suffered from skin and infection diseases.

**OBJECTIVES OF STUDY**

The study broadly examines an economic perspective of child labour in Odisha. Specific the objectives are:

1. To examine the socio-economic conditions of child labour in Khurdha district, Odisha.
2. To investigate the determinants and causes of child labours.

**METHODOLOGY**

The data has been collected mainly from primary and secondary sources. This study is based on primary and secondary data collected from census of India. Child labour commission in India and ILO. The primary data are collected from Khurdha district of Odisha. For our analysis summary statistics, tabular and graphical representations are used Secondary data includes, Census Surveys, Reports, journals, magazines and relevant websites.

**STATE- WISE DISTRIBUTION OF CHILD LABOUR IN INDIA**

The problem is large and acute in absolute numbers, the number of child labour who economically active in the age-group of 5 -14 years was 1.07 crores in the 1971 census which increased to 1.26 crores in 2001 and reduced to 1.01 in 2011. Table-1 shows percentage of child labour in all states in 2011.

**Table-1 State Wise Distribution of Working Children in India 2011 (In %)**

State	%	State	%	State	%
Andhra Pradesh	10.83	Maharastra	6.13	Uttaranchal	0.56
Assam	2.79	Manipur	5.78	West Bengal	6.81
Bihar	8.87	Meghalaya	0.43	A and N Island	0.01
Chhatisgarh	2.89	Nagaland	0.74	Ar. Pradesh	0.04
Gujurat	3.85	Orissa	3	Chandigarh	0.04
Hariyana	2.01	Punjb	1.41	D and N Havel	0.04
HP	0.85	Rajasthan	10.03	Delhi	0.33
J&k	1.39	Sikim	0.14	Daman Diu	0.01
Jharkhand	3.29	Tamilnadu	3.33	Goa	0.03
Kerala	0.21	Tripura	0.17	Mijoram	0.21
MP	8.46	Uttar Pradesh	15.31	Pondichery	0.01

Source- Census of India

The table-1 shows that the percentage of child labour in different states of India. It is found that there is highest percentage of child labour in Uttar Pradesh (15.31) followed by. Odisha constitutes 3% of the total percentage of child labour in India. The percentage of child labour is 5.97 % in 1981, 5.66 % in 1991, 4.72 % in 2001 and 4.50 % in 2011 as per census reports.

**Child Labour in Odisha**

Odisha is a less developed coastal state of India situated in eastern part of the country. The incidence of child labour is very high in the state. Table-2 shows child labour in Odisha in 2011. The table-2 highlights that rural child labour is 90.62 % whereas urban child labour is only 9.38 %. Since the landless labourers and marginal farmers are poor they send their children agriculture fields.



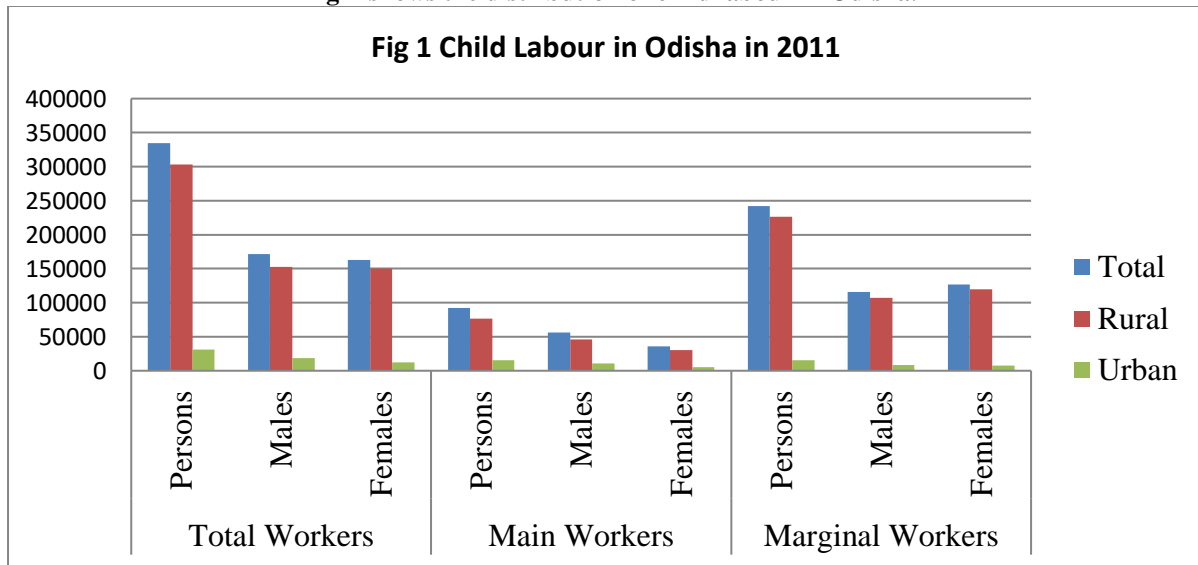
**Table-2 Child Labour in Odisha as per 2011 Census**

		Total	Rural	Percent	Urban	Percent
Total Workers	Persons	334416	303042	90.62	31374	9.38
	Males	171764	152978	89.06	18786	10.94
	Females	162652	150064	92.26	12588	7.74
Main Workers	Persons	92087	76388	82.95	15699	17.05
	Males	56325	45981	81.64	10344	18.36
	Females	35762	30407	85.03	5355	14.97
Marginal Workers	Persons	242329	226654	93.53	15675	6.47
	Males	115439	106997	92.69	8442	7.31
	Females	126890	119657	94.30	7233	5.70

Source- Census of India, 2011 and Authors Calculation

So child labour are more concentrated in rural area. If gender wise composition of child labour is analysed, the female child labour is 92.26 percent whereas male child labour is 89.06 percent. Among the child labourers main workers are 18.36 percent whereas female workers is 14.97 percent.

**Fig-1 shows the distribution of child labour in Odisha.**



The graph 1 illustrates that total, rural and urban child labour in Odisha in 2011. The landless labourers and marginal farmers are poor they send their children agriculture fields. This graph indicate that three phase of workers are total workers, main workers, marginal workers. Both comparatively male and female labours are participated different type of works. Among rural child labour highest percentage in different workers.

**Table -3 Distribution of Child labour by Category of Work**

Category of Work	Frequency	Percentage
Hotel	28	14.0
Agriculture	54	27.0
Household work	37	18.5
Shop	45	22.5
Others	36	18.5
Total	200	100

Source- Field Data and computed by Author

The table-3 explains that the gender wise child labour under the study. Shop occupation has highest 32 male child labour which is 16 % and female child labour is 29 which is 14.5 %. 7.5 % male child labour is engaged in household work. Parents are economically backwardness for which both male and female child labours join all these different occupation.



**Determinants of Working Hour of Child Labour**

The determinants of working hours of child labour have been identified and estimated with the help of a linear multiple regression model. In the regression model, the working hour of child labour is the dependant variable and the independent variables are family income, family size, education of child labour, education of father and education of mother.

The regression model is as follows:-

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + U$$

Where Y = Working hour of child labour

X<sub>1</sub> = Family income (Monthly income in rupees)

X<sub>2</sub> = Family size (in number)

X<sub>3</sub> = Education of child labour (in terms of schooling years)

X<sub>4</sub> = Education of father of child labour (in terms of schooling years)

X<sub>5</sub> = Education of mother of child labour (in terms of schooling years)

α = Intercept term

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub>, and β<sub>5</sub> are co-efficient of X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub> and X<sub>5</sub> respectively.

U = Error term

The working hours of child labour is taken as dependent variable and five independent variables are considered for the step wise regression to find out the significance of determinant variables. The results are given below in table-4.

**Table-4 Step-wise Regression results**

S N	Constant	Family Income (X <sub>1</sub> )	Family Size (X <sub>2</sub> )	Education of the children (X <sub>3</sub> )	Education of father (X <sub>4</sub> )	Education of mother (X <sub>5</sub> )	Age of Child Labour	R <sup>2</sup>	F Value
1	8.700 (24.510)	0.000 (-0.984)						0.005	0.968
2	8.396 (12.595)	0.000 (-1.004)	0.049 (0.539)					0.006	0.628
3	7.146 (12.260)	0.000 (-0.789)	0.054 (-0.703)	0.468* (8.826)				0.289	26.546*
4	6.966 (11.359)	0.000 (-0931)	0.057 (0.738)	0.477* (8.858)	0.078 (0.942)			0.292	20.120*
5	6.933 (11.248)	0.000 (-0.932)	0.054 (0.708)	0.482* (8.843)	0.046 (0.479)	0.123 (0.647)		0.294	16.131*
6	4.03 (5.099)	0.000 (-1.593)	0.096 (1.327)	0.373* (6.807)	0.057 (0.628)	0.064 (0.356)	0.291* (5.358)	0.39	20.15*

Source-Computed by the Author

Figures in the parentheses indicate ‘t’ values.

\* Significant at 1 percent level, \*\* Significant at 5 percent level, \*\*\*Significant at 10 percent level

The calculated value of the test statistic’s t is of X<sub>1</sub> is (-0.984) which implies that family income has no significant impact on the working hour of the child labour. Since R<sup>2</sup> is 0.005, it implies that 0.5 per cent variation in Y has been explained by the repressor, i.e. family income. In the second regression equation, the computed value of ‘t’ of X<sub>1</sub> is (-1.004) which means working hour of child labour is significantly influenced by family income. Family size is also affecting the working hour of child labour significantly as the estimated slope coefficient is 0.049. Child education has significant impact on the working hour of child labour. The estimated slope coefficient explains that for one unit increase in education of child labour, working hour decreases by 0.468 hour. It is also found from fourth regression model that that family income has significantly influenced the working hour of child labour, this is very much evident from the corresponding ‘t’ value, i.e. (-0931)of X<sub>1</sub> (significant at 1 percent level of significance). The estimated slope coefficient indicates that for one unit increase in family income, working hour of child labour decrease by 0.000 hour. On the other hand, family size has also significant impact on the working hour of child labour.

The estimated slope coefficient of family size shows that for one unit increase in family size, working hour of child labour decreases by 0.057 hour. With regard to child’s education it is found that this variable has no significant impact on the working hour of child labour. In regression equation five, the computed value of the test statistic ‘t’ of X<sub>1</sub> (-0.932) is greater than the tabulated value of ‘t’ (2.576) at 1 percent level of significance. Hence, family income has significant impact on the working hour of child labour. From the estimated slope coefficient it



is found that one unit increase in family income decreases the working hour of child labour by 0.000 hour. In case of the second explanatory variable (family size), it is found that family size has also significant impact on the working hour of child labour and X<sub>2</sub> is significant at 5 percent level of significance. The slope coefficient X<sub>2</sub> shows that for one unit increase in family size, the working hour of child labour increases by 0.054 hour. Similarly, the impact of child’s education on the working hour of child labour is also significant and X<sub>3</sub> is significant at 1 percent level of significance. The slope coefficient indicates that one unit increase in child’s education decreases the working hour of child labour by 0.482 hour. It is found from ‘t’ value of X<sub>4</sub> (significant at 10 percent level of significance) that the impact of father’s education on the working hour of child labour is significant. The estimated slope coefficient indicates that there would be 0.046 hour decrease in the working hour of child labour due to one unit increase in father’s education. So the occurrence of child labour is not only determined by the poor economic condition of the household but also by a set of factors like family size, education of the child and education of the parents” is rejected. So we can clearly state that the child labour is only caused by the poor economic condition of the household and not by the other factors such as family size, education of the child and education of the parents.

**Determinants of Income of Child Labour**

Another multiple regression model is used in order to know the relative significance of the factors determining the child labour income. The income of child labour is determined by various factors, i.e., working hour of child labour, child desire to work and education of child labour. In order to identify the significant determinants of child labour income, this regression model has been fitted by taking into consideration the most possible determinants. For the purpose of regression, three variables have been taken into consideration. The independent variables used in the regression model are working hour of child labour, child desire to work and education of child labour. The dependent variable is the monthly income of child labour. The model is as follows

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + u$

Where,

Y = Child labour income (annual income in rupees)

X<sub>1</sub> = Working hour of child labour

X<sub>2</sub> = Age of Child labour

X<sub>3</sub> = Education of child labour (in terms of schooling years)

α = Intercept term

β<sub>1</sub>, β<sub>2</sub> and β<sub>3</sub> are co-efficient of X<sub>1</sub>, X<sub>2</sub>, and X<sub>3</sub>, respectively.

u = Error term

The regression analysis of this has been presented in the following table-5.

**Table-5 Regression results of income of child labour**

Constant	Working hours of child labour (X <sub>1</sub> )	Age of Child labour (X <sub>2</sub> )	Education of Child labour	R <sup>2</sup>	F Value
2313.709 (5.110)	-70.347 (-1.395)	79.070* (1.957)	-17.769 (-0.422)	0.54	1.609

Source- Computer by the Author 2018

\* Significant at 10 % Level

From the above regression analysis it is found that the calculated value of ‘t’ of X<sub>1</sub> is (-1.395) which is greater than the tabulated value of ‘t’ at 1 percent level of significance. This indicates that the impact of hours of work on income of the child labour is significant. Child desire to work also significantly affects the income of child labour as the coefficient is significant. It is found that child education has negative impact on the income of child labour. With one unit increase in education of child labour there is 17.769 rupees decrease in child labour’s income. Further it is found that 54.0 per cent variation in Y has been explained by the repressors. The results show that all the three variables namely, hours of work of the child labour, child desire to work and education of the child labour are the major determinants of child labour income per annum. The estimated value of the regression coefficient of children’s desire to work has a positive and significant influence on employment of working children. So it is observed that higher the desire to work higher will be the engagement and working hours and higher will be the child labour income and vice versa.

1172.25 which is extremely low. There is wide variation in monthly income of child labour as standard deviation is 871.19.



### Important Causes of Child Labour

- 1) **Poverty:** Poor families need to keep as many family members working as possible to ensure income security and survival. This makes it very difficult for poor families to invest in their children's education. In fact, educating a child can be a significant financial burden, poverty force parents to send their children to hazardous job.
- 2) **Over population:** limited resource and more mouth to feed, children are employed in various form of work
- 3) **Parental illiteracy:** illiteracy parents do not realise the need for a proper physical emotional and cognitive development of a child.
- 4) **Urbanization:** MNC's and expert industries in the developing world employ child workers.
- 5) **Unemployment of elders:** elders often find difficult to get job. The industrialist and factory owners find it profitability to employ children. They will also create union problem
- 6) **Orphans:** children born out wedlock, children with no parents and relatives, often do not find any one to support them .thus they are forced to work for their own living.

### CONCLUSION

The prevalence of child labour is more or less seen in all periods of time, it varies in nature and dimension depending on the existing socioeconomic structure of the society. Children are found working under hazardous conditions such as mining, auto repair, battery recharging, saw milling, welding, and rickshaw pulling, garments manufacturing and working with dangerous machinery. It is clear from this study that child labour has higher probability to create negative impacts on future life. Since child worker does not get opportunity to get better education, they cannot get better job opportunities in future life. Consequently, their income remains low which only ensure low standard of living. So, poverty and illiteracy are the main causes for leading child labour.

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