AN EMPIRICAL STUDY OF DETERMINANTS OF CHILD LABOUR

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Abstract: The objective of the study is to analyse the nature and magnitude of the problem and determinants of child labour and their participation in the workforce at an early age in Cuttack City 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. Free basic facilities and education to extreme poor, community participation, awareness among the people, parents and particularly women's education and active participation of the citizens and local bodies can reduce incidence of child labour in India.
Keywords: Child Labour, Family Size, Poverty, Work, Wage.

Introduction

Child labour is a multi-faceted issue that has been addressed at both the international and national levels. In recent years, forces such as international trade have become instrumental in shaping discussion on this issue. According to UNICEF, State of the World's Children 2010 an estimated 12 percent of children in India ages 5-14 are engaged in child labor activities, including carpet production. The problem is widespread and not confined to any particular economy. It is prevalent in both rural and urban area. As for the NSSO 2009-10 survey, the total number of child labour in Odisha was 13,45,63 which constitute 2.70% of the total, where 67.56 percent were males and 32.44 percent were female child labour. In India more than 20 percent of the GNP of the country, is to be contributed by child labour. According to NSSO, 2009-10 survey, the total child labour in India between age group 5-14 was 49,83,871 where percentage of males was 61.36 and percentage of females was 38.64. The highest number of child labour were in Uttarakhand says 17,75,333 and it also constitute the highest number of child labour percentage of 35.62 from the total percentage of child labour in India. Kerala had the lowest number of child labour says 2765 and 0.06% of the total. The highest male and female child labour is found in Uttarakhand i.e 11,60,114 and

17,75,333 respectively. The lowest male child labours were in Kerala i.e 1182. In Odisha the total number of child labour is 13,45,63 which constitute 2.70% of the total child labour in India. Out of them, 67.56 percent are male and 38.64 percent are female child labour. So it is observed that including Odisha child labour is still a major problem for many states of India. With regards to the ranks, the states namely Uttarakhand, West Bengal, Rajasthan, Gujarat and Bihar have top five positions and Delhi, Tamilnadu, Chhatisgarh, Himachal Pradesh and Kerala have last five ranks. Uttarakhand has the first rank in chila labour where the Kerala has rank and Odisha has in 11th rank.

According to the statistics given by ILO, 73 million children between 10 to14 years of age are employed in economic activities all over the world. The figure translates into 13.2 of all children between age group 10 to 14 being subjected to child labour. Child labour is most rampant in Asia with 44.6 million or 13% percent of its children doing commercial work followed by Africa at 23.6 million or 26.3% which is the highest rate and Latin America at 5.1 million that is 9.8%. In India, 14.4% children between 10 and 14 years of age are employed in child labour. In Bangladesh, 30.1% in China, 11.6%, in Pakistan, 17.7%, in Turkey, 20.5%, in Egypt, 11.2%, in Kenya, 41.3%, in Nigeria, 25.8%, in Senegal, 31.4%, in Argentina, 4.5%, in Brazil, 16.1%, in Mexico, 6.7%, in Italy, 0.4% and in Portugal, 1.8%. The above figures only give part of the picture. No reliable figures of child workers below 10 years of age are available, though they comprise a significant amount. The same is true of children in the former age group on whom no official data is available. If it was possible to count the number of child workers properly and the number of young girls occupied in domestic labour taken into account-the figure will emerge as hundreds of millions. Child labour is also prevalent in rich and industrialized countries, although less compared to poor nations. For example there are a large of children working for pay at home, in seasonal cycles, for street trade and small workshops in Southern Europe. India is a glaring example of a nation hounded by the evil of child labour. It is estimated that there are 60 to 115 million working children in India- which was the highest in 1996 according to human rights.

In case of Odisha, as estimated in 2001 census, there are around 2.98 percent of the total labours forces working in different sectors of the economy. Out of these children, 94.87 percent are in different rural areas of the state and only 5.13 percent are found in urban areas and the Cuttack city constitutes 2.7 percent of the total labour force. According to a Child Labour survey in NCLP districts of Odisha, 2011-12, the total child labour in Cuttack is 3472 or 2.04 percent of the total, where 49.25 percent are males and 50.75 percent are female child

labour. Thus labour seems to be a burning problem not only in India but also in small cities like Cuttack in the state of Odisha. In this context, the objective of the study is to throw some light on the nature and magnitude of the problem and determinants of their participation in the workforce at an early age in Cuttack City of Odisha. In this context, objectives of the paper are to examine the nature and magnitude of working children in Cuttack city and to identity the factors responsible for the occurrence of child labour.

Literature Review

Tripathy (1989) in his survey of child labour in the city of Bhubaneswar (Orissa) concluded that there were more than two thousand child workers in the city engaged in various occupations. Tripathy in his study in 1991 observed that in Odisha child labourers are mostly found in backward districts like Phulbani and Mayurbhanj. Nearly 80 per cent of those workers are involved in agricultural operations. The estimates of child labour in the country differ, but undoubtedly, India today is having the largest number of child workers in the world. Kishwar and Horowitz (1982) observed that children in both rural and urban areas undertook non-productive, unpaid work for the maintenance of household, thus allowing their parents to work as wage labourers outside home. Caring for younger siblings, cooking, cleaning, washing, fetching water etc. were some of the tasks performed by a child. Reddy Chenna (1985) highlighted that in Delhi children were found working for low wages and on little food, in hotels, restaurants and wayside shops as hawkers, newspaper vendors, porters, shoe-shine boys, sweepers and scavengers, in workshops and repair shops and as helpers at construction sites, breaking stones and loading and unloading goods.

In his study Kanbargi (1988) found that the age and the sex of the child played an important role in determining the child's activities. Children put in an increasing amount of time on more productive activities as they grew. The number of children working for wages was significantly large in the 12 to 14 age group. Girls were found working for longer hours in all the age groups compared to boys, though the nature of their work differed. Boys usually worked on farms, tending cattle while girls spent more time in looking after their siblings, washing, and cleaning, sweeping and other household chores. Similar observation has been made by Mahakud (1988). In Western Odisha children were mainly engaged in household work, animal care, minor forest product collection, ploughing, weeding, transplantation and harvesting. Females of younger age group were mainly engaged in household work.

Myron (1991) in his observation revealed that in India large number of children

worked in cottage industries producing carpets, matches, tine crackers, bidis, diamonds, glass, hosiery, handloom clothes, embroidery, bangles and traditional handicrafts, often for wages, but sometimes without wages alongside their parents. The study by Weiner (1991)[17] reveals that, historically in our country, child labour has been seen as an economic phenomenon. As per his study, the relationship between children and work is dictated to a great extent by the state of economic development or the system of prevalent in the country production.

A study of the Committee on child labour (1979) appointed by the Ministry of Labour, Government of India examined various dimensions of child labour in different occupations. The study revealed that the incidence of child labour was highest in Andhra Pradesh, where it accounted for about 9 percent of the total labour force, 9.2 per cent of the total child population and 3.7 percent the of the total population of the state in 1971. The child labour was more prevalent in rural areas than in urban areas. The participation of children in the labour force in the age group of 10- 14 years was very high (28.9%) for males as compared to females (20%).

Another study on the working children in Bombay by Singh, M.(1980) reveals that in the age group of 6- 15 years found that most of the working children belonged to low income groups in urban centers who generally reside in slums and depressed areas. This study was conducted on 203 boys (67.7%) and 97 girls (32.3). Out of these 300 working children 211 (70.3%) worked under employer and 89 (29.7%) were self- employed. The study stated that male children shouldered the family's economic responsibility to a large extent than the female.

Data Base and Sampling Design

The study in this paper is based on primary data collected from Cuttack city of Odisha. The relevant information is elicited from 50 child labourers, their parents and employers with the help of a structured questionnaire designed for the purpose. The questionnaire is pretested and suitably modified before administering them to the sample respondents. The information pertaining to the socio-economic conditions, income, employment position etc. have been collected from the child labour. Some information have been collected from the parents, educated persons of the sample area and employers of child labour on certain issues like family income, occupation and employers' attitude towards child labour, etc

The study is based on two-stage sampling. Since reliable frame is available on child

labour in Cuttack city, this type of sampling has been taken. In the first stage on the basis of high availability of child labour five places have been selected and in the second stage randomly samples were taken from the selected areas. The areas of Cuttack city, where the concentration of shops and commercial establishments are very high and are centrally located, have been selected for drawing some sample. From these areas, the sample comprise of children working in tea stalls, eating shops, cycle repairing shops, garages, shoe polishing/repairing shops etc. The areas in the vicinity of Railway station and bus stop like Badambadi bus stand has a large population of working children engaged in rag-pickers, hawkers and shoe-shiners. I have included a small group of children from these areas in our sample. Besides, Cuttack city is also surrounded by slums here and there. The children of slums like Pattapol and Tulasipur are mainly engaged in various types of activities, such as domestic servants, hawkers, vendors, self employed children, etc. My sample also included these types of children from the slum areas of Cuttack. And the developed area like Buxi Bazar Square which witness some child labourers in hotels, garages and other works thus it's also included in the sample survey. Total samples of 50 children have been selected for the purpose of field survey, 10 child labourers are selected from five locations as given in table-1.

Table-1 Distribution of sample child labourers

Localities	Samples
Badambadi	10
Railway Station	10
Buxi Bazar Square	10
Pattapol	10
Tulasipur	10
Total	50

Methodology

The magnitude of child labour in different occupations in the study area has been estimated. The nature of child labour in terms of their various socio-economic and personal characteristics has been presented in terms of simple statistical tables and figures. The economic conditions of the child labour have been analysed in terms of their employment status including hours of working, wage rate, working condition, family income, assets and debts position of the family, child labour's contribution towards family income, etc. For this, simple analysis with the help of tables and figures has been adopted. The determinants of

occurrence 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:-

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + U$

Where Y = Working hour of child labour

X_1 = Family income (annual income in rupees)

X_2 = Family size (in number)

X_3 = Education of child labour (in terms of schooling years)

X_4 = Education of father of child labour (in terms of schooling years)

X_5 = Education of mother of child labour (in terms of schooling years)

α = Intercept term

β_1, β_2, β_3, β_4, and β_5 are co-efficeints of X_1, X_2, X_3, X_4 and X_5 respectively.

U = Error term

Child Labour in Cuttack City

According to the 2011 Child Labour Survey by the State Labour Institute, Bhubaneswar the total child labourers in Cuttack district is 3472 or 2.04 percent of the total child labour in all NCLP districts of Odisha, out of which 1710 or 49.25 percent are males and 1762 or 50.75 percent are females. So the number of female child labours is more than the male child labours. If we will talk about the rank in terms of number of child labour then Cuttack will come in the 17th rank from the 19 NCLP districts of Odisha. A total of 2006 numbers of child labours are found in non-hazardous sector from which 890 are males and 1116 are females. Similarly in hazardous sector there are total 1466 child labours out of which 820 are males and 646 are females. Total number of child labours in age group 6-8 is 632 and in age group 9-14 is 2840. Thus the child labours are more in age group of 9-14 than the age group of 6-8. From an earlier survey of labour Institute Bhubaneswar, it was found that in 1997, total child labours of Odisha was 215222, where the child labours of Cuttack was 7427. In 2006 it increased to 486461 in Odisha in which the child labours of Cuttack also increased to 14509.

As the old capital and most populated city of Odisha, a major railway hub of the east coast, Cuttack attracts countless numbers of homeless and poverty-stricken families

migrating from rural areas in search of work. According to a survey by NCLP Society, Cuttack approximately 2,25,000 or 42% of the total city population are living in slums in unimaginable conditions where crime, drug and alcoholism are rampant. Of these slum inhabitants, some 30,000 are children who have found ways to survive on the streets, railways and rubbish heaps by rag-picking, begging, scavenging, and vending. Generally the people are living in these places are Telugu, Bengali and Muslim migrants those are migrated from Andhra Pradesh, West Bengal and other areas who have scattered to Malgodown, Badambadi, Buxi Bazar, Railway station, Tulsipur, Naya Bazar and several other places in the city of Cuttack.

Determinants of Child Labour

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-2.

Table-2 Regression results of working hour of child labour

Sl. No.	Constant	Family Income(X1)	Family Size (X2)	Education of the children (X3)	Education of father (X4)	Education of mother (X5)	R^2	F-Value
1	3.547 (2.636)	-0.458* (4.567)	-	-	-	-	0.514	86.722
2	1.229 (2.937)	-0.345* (3.984)	0.580** (1.985)	-	-	-	0.535	62.274
3	3.007 (2.106)	-0.283* (2.587)	0.286** (1.995)	-0.453** (2.527)	-	-	0.546	54.213
4	2.887 (2.064)	-0.316* (4.836)	0.236*** (1.721)	-0.323 (0.695)	-0.363* (2.740)	-	0.558	48.891
5	2.629 (1.804)	-0.318* (2.835)	0.290** (2.473)	-0.257* (2.194)	-0.208*** (1.672)	-0.325 (0.685)	0.569	39.497

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 't' of β_1 is 4.567 which implies that family income has significant impact on the working hour of the child labour. Since R_2 is 0.514, it implies that 51.4 per cent variation in Y has been explained by the regressor, i.e family income. In the

second regression equation, the computed value of ' t ' of β_1 is 3.984 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 0.580. 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 0.453 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. ,4.836 of β_1 (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 0.316 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 0.236 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 β_1 (2.835) 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 0.318 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 β_2 is significant at 5 percent level of significance. The slope coefficient β_2 shows that for one unit increase in family size, the working hour of child labour increases by 0.290 hour. Similarly, the impact of child's education on the working hour of child labour is also significant and β_3 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 0.257 hour. It is found from 't' value of β_4 (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 0.208 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.

Regression Model-II

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 annual income of child labour. The model is as follows

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + u$$
Where,
Y = Child labour income (annual income in rupees)
x_1 = Working hour of child labour
x_2 = Child desire to work (in terms of working hours)
x_3 = Education of child labour(in terms of schooling years)

α = Intercept term
β_1, β_2 and β_3 are co-efficeints of x_1, x_2, and x_3, respectively.
u = Error term

The regression analysis of this has been presented in the following table-3

Table-3 Regression results of income of child labour

Sl. No.	Constant	Working hours of child labour (X1)	Child desire to Work (X2)	Education of the child labour (X3)	R^2	F- Value
1	-114.853	.468*	.245*	-.345*	.835	77.859
	(-.221)	(6.012)	(2.963)	(3.924)		

Significant at 1 per cent level

Figures in the parentheses indicate 't' values.

From the above regression analysis it is found that the calculated value of 't' of β_1 is 6.012 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 .345 rupees decrease in child

labour's income. Further it is found that 83.5 per cent variation in Y has been explained by the regressors. 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.

Conclusion

Parents in study area are illiterate with poor back ground for which children have no interest for school. Most of the parents are unable to have a meal for themselves but they have 5 to 10 children. People are engaged in drinking alcohol who considers children are source of earning. So they welcome more and more children are engaged in domestic work, collection of wood, tin, plastics etc. road side cafes automobile workshops, construction sites in agriculture work. Girls child are child labour in that area engaged in 10-12 hours in work with low wage, there is no holiday for them, and they don't have any type of enjoyment. Thus, a child labour's life is characterized by low education, poor living, bad working and living conditions, insecurity of jobs, low income, long hours of work etc. Normally they are from poor and larger families who are forced to join labour force to supplement the family income. To conclude, children's development and the overall eradication of Child labour problem of Cuttack depend on active public private partnership, proper government policies and programmes for eliminating poverty and unemployment and free basic facilities and education to extreme poor, community participation, awareness among the people, parents and particularly women's education and active participation of the citizens and local bodies.

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