

TOWARDS AN EXPLANATION OF INTER STATE DISPARITIES IN CHILD LABOUR IN INDIA: A LONG TERM COMPARATIVE STUDY OF HIGH AND LOW INCIDENCE STATES

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Though child labour has been declining overtime in India, wide inter-state variations exist, with the pace of decline being vastly dissimilar across states. Moving away from the micro-econometric approach that characterizes most of the work on child labour (especially those on India), we adopt a comparative study method, whereby we compare states that have evinced lower child labour incidence rates with those that reveal higher ones over a long period of time, with the aim to critically analyze the relative roles of economic and social development in shaping child labour trends in India beginning the early 1960s. It is our contention that analyzing the similarities and dissimilarities among these states in terms of key indicators would shed light on key factors and processes that determine child labour in India. Essentially, we build a chain of evidence that points towards the overwhelming importance of a few factors (agricultural wage and literacy rates in this case) and build an explanation towards why such factors could be of utmost importance. Also, we argue that though wage legislations may have ambiguous effects, the role of governments may still be very important and could lie essentially in providing inputs for social development and keeping agricultural wages buoyant in rural areas by means of creating demand for unskilled labour mainly in off-farm activities.

Key words: Child labour; India; Agricultural Wages; Literacy; Social Development

Introduction and Background

Notwithstanding a considerably long history of efforts towards putting a stop to child labour (at least since 1949, when the *Factories Act 1948* was enforced), India has a long way to go. Recent estimates provided by the International Labour Organization (ILO) reveal that within South Asia, the magnitude of child labour (children between 5 and 17 years of age) is highest in India (58 lakhs), followed by Bangladesh, Pakistan and Nepal in that order (ILO and UCW, 2014).¹ Though child labour has been declining overtime in India, wide inter-state variations exist, with the pace of decline being vastly dissimilar across states. Thus, at one extreme are states that have achieved significant progress in elimination of child labour, such as Kerala (0.4), Tripura (0.7) and Punjab (1.8), and at the other are states that have failed to do so, viz., Andhra Pradesh (2.5), Maharashtra (2.4) and Sikkim (2.2) (Census of India, 2011).

Curiously enough, the relative *ranking* of a large number of states, especially towards both ends of the continuum has remained somewhat stable over the last five

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decades. Thus, while Kerala, West Bengal and Punjab were among the states with the lowest incidence of child labour and placed at the lower end of the spectrum from 1961 to 2011, Andhra Pradesh Karnataka and Maharashtra were at the higher end during the same period (a more detailed description of the pattern and trends in the incidence of child labour among Indian states is contained in the next section). Remarkably, regardless of the avowed positive association between economic development and child labour, we fail to find a straightforward relationship here. For instance, while Kerala ranked first in HDI during 2007-08 and West Bengal ranked thirteenth among 24 major states (states with relatively lower incidence of child labour), Maharashtra and Andhra Pradesh (those with higher child labour incidence) ranked seventh and fifteenth respectively during the same year. Certainly then, the channels through which economic progress affects child labour are much more complex and deserve careful investigation.

Having said this, the fact that poverty is at the root of child labour is hardly debatable. Indeed, empirical research on the topic largely supports the poverty hypothesis (or the *luxury axiom*) put forth by Basu and Van in their seminal paper, '*The Economics of Child Labour*' published in 1998, which essentially argues that child labour arises due to the inability of poor households to maintain a minimum level of welfare without the economic contribution of child members (see for instance, Amin, Quayes and Rives 2004; Huebler 2008; ILO 1992; Jensen and Nielsen 1997; Ray 2000 and the literature cited therein).² What is more interesting however is that, as pointed out by the authors, due to wage rigidities (probably at or near subsistence levels) that characterize the labour markets of developing countries such as India, the solution to the problem can hardly be as simple as a minimum wage legislation. In fact, implementation of such legislation could have a boomerang effect and lead to increased incidence of child labour by increasing adult unemployment. Thus, while on the one hand, it is clear that the trickledown effect of increasing per capita income (or declining poverty) on reducing child labour would take a very long time, on the other, policy makers are left with few options of reducing it significantly over acceptable time periods.

Further research has explored alternative paths to lowering the incidence of child labour within a relatively shorter time. Important among them has been the hypothesis that lack of educational opportunities is a primary cause of children engaging in work, and thus compulsory primary education as a way of eliminating child labour (Bhargava 2003; Burra 1996). However, it is important to note that child workers in India are largely literate (see for instance, Samantroy, Sekar and Pradhan 2016: 36) which points towards at least two possibilities. First, households try to engage children in work even when they attend school (reaffirming the poverty hypothesis). Second, children drop out of schools to engage in work (probably after primary level) as the returns to education are low and there is hardly a direct link between education and securing jobs (for a detailed analysis of these possibilities, see Jafarey and Lahiri 2001). The upshot of the argument is that universalizing primary education, though undoubtedly imperative, may still not bring down child labour to socially acceptable levels.

Interestingly, what has in fact emerged from empirical research is that, it is the education of parents especially that of mothers that has a significant positive effect towards reducing child labour, even after controlling for the income level of households, which suggests that social development has a crucial role to play in the process. In fact, social development indicators, such as educational attainment, fertility (or household size), government expenditure in social sector (especially health) have been found to be at least as important as economic ones in determining the incidence of child labour (Aggarwal 2004; Das and Mukherjee 2007; Dev 2004; Grigoriou and Graziosi 2008; Lloyd 1994; among others).

In this context, the primary purpose of this paper is to critically analyze the role of economic and social development in shaping child labour trends in India. The present study is a departure from earlier ones that have largely employed micro-econometric analysis. It is our contention that a macro perspective, which assumes a long term comparative view, could throw useful light on the matter, thus revealing factors that have not been emphasized so far. Indeed, as we will see in the following sections, analysis of the causes of divergence in the incidence of child labour among the good and bad performing states illustrates that the State has an important role that encompasses much more than legislation (whose efficacy is debatable). Specifically, we argue that the role of governments may still be very important and could lie essentially in keeping agricultural wages buoyant in rural areas by means of creating demand for unskilled labour mainly in off-farm activities.

Trends and Pattern of Child Labour In India: An Overview

As we can see from the table 1, there exist vast differences in the incidence of child labour among Indian states from 1961 till 2011. For instance, we find that during 1961 while the incidence of child labour is as low as 4.1 and 6.2 percent in Kerala and West Bengal respectively, there are others like Sikkim, Nagaland and Andhra Pradesh, where around (and even more than) 30 percent of children between 5 and 14 years of age are in full time employment (i.e. classified as 'main' workers in census). Even though there has been a secular decline in the incidence of child labour both at the all-India level and for individual states (with minor hiccups), the numbers of child workers presently in India are not insignificant by any means (in absolute numbers there were around 1.2 crore child labourers in India during 2001 and nearly 43 lakhs during 2011). Also, as table 1 reveals inter-state differences in the incidence of child labour have narrowed overtime, but remain significant. In fact, it could be mentioned here that alternative estimates of child labour available from National Sample Survey Organisation (NSSO) and National Family Health Survey (NFHS) broadly agree on the magnitude and pattern of child labour in India. For instance, NSSO estimates (from employment-unemployment survey, where the definition employed is closer to the definition of 'main' workers as employed in the census) for the period 2009-10, report a figure of around 49.8 lakhs for child workers. Furthermore, the study by Dev (2004) using the second round of NFHS corresponding to the period 1998-99, reveals a similar pattern of child labour across Indian states, with states like Andhra Pradesh and Maharashtra

Table 1
Ranking of Major States According to Incidence of Child Labour: 1961 to 2011

RANK	1961	1971	1981	1991	2001	2011				
I	Kerala	4.1	Kerala	2.6	Assam	N.A.	Kerala	0.3	Kerala	0.4
II	West Bengal	6.2	West Bengal	5.4	Kerala	1.6	Jammu & Kashmir	N.A.	Himachal Pradesh	0.9
III	Jammu & Kashmir	8.3	Haryana	5.6	West Bengal	4.9	Kerala	1.6	Orissa	1.0
IV	Punjab	11.7	Assam	6.1	Haryana	5.1	West Bengal	4.9	Haryana	1.1
V	Uttar Pradesh	12.7	Uttar Pradesh	6.9	Uttar Pradesh	5.2	Haryana	5.1	Uttar Pradesh	1.2
VI	Gujarat	13.9	Jammu & Kashmir	7	Punjab	5.5	Punjab	5.4	Maharashtra	1.3
VII	Assam	14.2	Punjab	7.8	Bihar	6.1	Bihar	6.2	Gujarat	1.3
VIII	Bihar	15.5	Bihar	8.6	Gujarat	6.9	Gujarat	6.8	Assam	1.4
IX	Tamil Nadu	16	Gujarat	8.8	Himachal Pradesh	7.2	Himachal Pradesh	7.6	Jammu & Kashmir	1.5
X	Maharashtra	17.4	Tamil Nadu	9.1	Rejasthan	8	Rejasthan	8.9	Punjab	1.6
XI	Haryana	18	Maharashtra	9.4	Jammu & Kashmir	8.7	Uttar Pradesh	9.5	West Bengal	1.8
XII	Orissa	18.9	Himachal Pradesh	10.1	Orissa	9.8	Maharashtra	9.8	Bihar	1.8
XIII	Karnataka	20.1	Rejasthan	10.1	Tamil Nadu	10.2	Tamil Nadu	9.8	Madhya Pradesh	1.9
XIV	Madhya Pradesh	22.6	Orissa	10.6	Maharashtra	10.5	Orissa	10.1	Rajasthan	2.1
XV	Rajasthan	25.7	Madhya Pradesh	12.1	Madhya Pradesh	12.7	Madhya Pradesh	12.9	Tamil Nadu	2.3
XVI	Andhra Pradesh	26.9	Karnataka	13	Karnataka	13.2	Karnataka	13.2	Karnataka	2.4
XVII	Himachal Pradesh	30.2	Andhra Pradesh	18.4	Andhra Pradesh	17	Andhra Pradesh	16.5	Andhra Pradesh	2.5

Source: Author's calculation from Census of respective years.

and Gujarat exhibiting higher child labour incidence and Kerala, Punjab and Haryana showing lower ones (Dev, 2004: 741).

Turning now towards the relative ranking of states in terms of the incidence of child labour, we find that whereas there has been some movement in the relative ranking of states during the last five decades, states at the extremes of the continuum have rather remained constant (table 1). For instance, Kerala that evinced the lowest incidence of child labour, and thus ranked first during 1961, retained its rank all through till 2011. At the other extreme are states like Andhra Pradesh that have occupied the last rank from 1961 to 2011, indicating that even though child labour has been declining overtime the pace of decline has been slower compared to others, especially the ones that have improved their ranking during this period viz., Himachal Pradesh. However, as will be noticed readily from the table, considerably few states have been able to improve their position during this time and thus overall, the status quo has been maintained with a few exceptions (table 2).

Two final points regarding the pattern of child labour in India deserve special mention. The first is that as several studies have indicated, child workers are concentrated in agriculture and allied activities. In fact, as NSSO data reveal nearly two-thirds of the children are engaged in the agricultural sector in India (a large section of them being employed in own farms or those of their relatives). This is followed by the manufacturing sector (around 16 percent) followed by trade, hotels and restaurants (NCPDR n.d.). Thus, most of the children are engaged in the informal economy, which makes it harder for child labour legislations to make an impact. Secondly, even though efforts towards making primary schooling free and compulsory for children has been effective in increasing literacy rates in the child population, its effectiveness in reducing the incidence of child labour is more questionable. In fact, as census data for the year 2011 reveal, the distribution of child workers according to educational attainment shows that in nearly every state the percentage of literate child workers (at least up to primary level) is significant, which takes away from the schooling argument in reducing child labour to a certain extent (Samantroy *et. al.* 2016).

Data and Method of Analysis

The Census and NSSO are the two official sources of data on child labour (though data from large scale sample surveys, primarily the NFHS have also been put to use recently). We have relied on the statistics provided by the Census in our calculations of the incidence of child labour in the present study for the principal reason that it is the only source that allows the construction of long term trends in child labour as required in the present study. Furthermore, we have considered only 'main' workers as defined in the census (i.e. who have been employed for six months or more in the year preceding the census survey) in this analysis. Thus, the study focuses on those children who are in a way, permanently in the job market and are most vulnerable in terms of losing out on education and chances of a better future.

The explanatory variables used in the study viz., agricultural wages, per capita income, total fertility rate, poverty, literacy and measures of social consumption and development- have been culled from standard official sources and thus we do not discuss their quality here. However, we should mention here that data on real agricultural wages employed in this study has been taken from Sharma (2005) which has based its estimates on data from *Rural Labour Enquiry*.³

As mentioned in earlier paragraphs, moving away from the micro-econometric approach that characterizes most of the studies (especially those on India), we adopt a comparative study method, whereby we compare states that have evinced lower child labour incidence rates (specifically Kerala and Punjab) with those that reveal high child labour incidence throughout the period under consideration (specifically Maharashtra and Andhra Pradesh). The specific selection of the states is guided by literature on key determinants of child labour, viz., per capita income, poverty and social development. It is our contention that analyzing the similarities and dissimilarities among these states in terms of key indicators would shed light on key factors and processes that determine child labour in India. Essentially, we build a chain of evidence that point towards the overwhelming importance of a few factors (agricultural wage and literacy rates in this case) and build an explanation towards why such factors could be of utmost importance here.

Trends in Demographic, Social and Economic Development: A Comparative Analysis of Selected States

Demographic Trends and Child Labour

Let's begin by examining broad demographic patterns and trends from the early 1960s to present times in the four selected states, viz., Kerala, Punjab, Maharashtra and Andhra Pradesh (AP) in a comparative view (table 2). First, we do not find any firm correspondence between incidence of child labour and demographic performance in terms of either population growth or the fertility rate. For instance, Punjab, which evinced relatively lower child labour incidence during the 1970s compared to Maharashtra and AP, reveals the highest TFR (5.2 births per woman) among the four states (table 1 & 2). Also, TFR in Kerala (4.0) during the same period seems to be marginally lower than that of Maharashtra (4.3) with a gap of 0.3 births per woman, while there seems to be a wide mismatch in the incidence of child labour between these states during 1971, which stood at 2.6 and 9.4 per cent respectively. Interestingly perhaps, as we can see from tables 1 and 2, even though vast differences continue to exist in the incidence of child labour, especially between the better performing states (Kerala and Punjab) and the others (Maharashtra and AP), fertility rates have more or less been the same across all states at least since late 1990s.

Kerala is far ahead on both IMR and life expectancy at birth compared to the other states. Even as early as 1971, the IMR in Kerala is found to be as low as 58 per thousand, when the corresponding rates for economically more advanced states such as Punjab

Table 2
Broad Demographic Indicators, Selected States: 1961 to 2013

<i>Indicators</i>	<i>Kerala</i>	<i>Punjab</i>	<i>Maharashtra</i>	<i>Andhra Pradesh</i>
I. Growth Rate of Population (%)				
1961-71	26.29	21.70	27.45	20.90
1971-81	19.24	23.89	24.54	23.10
1981-91	14.06	20.26	25.43	23.91
1991-2001	9.42	19.76	22.57	13.86
2001-2011	4.91	13.89	15.99	10.98
II. Total Fertility Rate				
1971-73	4.0	5.2	4.3	4.5
1981-83	2.8	4.0	3.7	3.9
1991-93	1.7	3.1	2.9	2.8
2011-13	1.8	1.7	1.8	1.8
% decline				
1970s	30	23.1	13.9	13.3
1980s	39.2	22.5	21.6	28.2
1990s	(-) 5.8	25.8	20.6	21.4
2000s	0	26.1	21.7	18.1
III. Infant Mortality Rate				
1971-73	58	112	107	109
1981-83	33	79	76	81
1991-93	15	55	56	69
2011-13	12	28	25	41
% decline				
1970s	43.1	29.5	28.9	25.6
1980s	54.5	30.4	26.3	14.8
1990s	26.6	9.1	21.4	8.6
2000s	(-) 9	44.0	43.2	34.9
IV. Life Expectancy at Birth				
1970-75	62.0	57.9	53.8	48.8
1981-85	68.4	63.1	60.7	58.4
1991-95	72.9	67.2	64.8	61.8
% increase				
1970-1985	10.3	8.9	12.8	19.6
1991-2013	2.6	5.8	10.0	9.8
2001-05	73.6	68.8	68.0	65.0

Sources: Census of India, various years, SRS Compendium on fertility and mortality indicators, 2012

and Maharashtra stand at 112 and 107 infant deaths per 1000 live births respectively (table 2).

Also, not only did Kerala have lower IMR and higher life expectancy over the entire period, the rate of decline in IMR is fastest for Kerala, followed by Punjab, Maharashtra and AP, in that order (the same however, does not hold true for the other state with relatively lower incidence of child labour, i.e. Punjab). Lastly, two points could be of further interest here. First, if we compare Kerala and Punjab (i.e. states which both reveal low incidence of child labour, with Kerala of course, evincing lowest child labour

incidence), we find that among them, the one which performs better in terms of IMR (and life expectancy), i.e. Kerala, also performs better in terms of child labour throughout most of the period from the beginning of the 1970s. Again, between Maharashtra and AP the one with lower IMR (Maharashtra) also evinces lower child labour incidence. Thus, there seems to be some relation between IMR (as a health parameter) and child labour. The relation comes out more strongly when we examine the pattern and trend in life expectancy at birth. Indeed, we find a strong association between life expectancy at birth and the incidence of child labour for every state as well as between the two groups of better performers (Kerala and Punjab) and others (Maharashtra and AP), indicating that better health of the population does have a positive association with lower child labour incidence as the comparison of the relevant figures for the four states suggest.⁴

Social and Economic Development

In this section we look into the relative roles of economic and social development in determining child labour in the selected states. Table 3 contains information on the relevant indicators over the period 1960-61 to 2011-12. Remarkably, as data on per capita net state domestic product (NSDP) and growth of per capita incomes confirm, Kerala managed to achieve very low child labour incidence rates amidst considerably depressed economic conditions during the early 1960s and 1970s (tables 1 and 3). Interestingly, though Punjab has had higher per capita incomes compared to the other states including Maharashtra for much of the period beginning 1960-61, the last decade and a half witnessed highest per capita incomes in Maharashtra, and still as we have seen earlier, the relative position of Maharashtra with respect to child labour did not change among the four selected states (and actually slipped down when all the major states of India are taken into account) (table 1). Moreover, the growth of per capita income broadly reflects the same pattern. Here, we could mention in passing that a cross-sectional view for recent years would have shown a strong positive association between child labour incidence and per capita income levels. But, a long term view of the issue reveals that this has not been the case.

Not surprisingly perhaps given its low per capita incomes (at least till recently) poverty (measured in terms of head count ratio) is found to be highest in Kerala among all the states during the 1970s and the lowest in Punjab. Therefore, while the experiences of Kerala and Punjab have been similar in the area of child labour, these two states have had very dissimilar levels of poverty. Maharashtra seems to be unique in the sense that from the beginning of the 1980s to present times, it reveals high poverty ratios combined with relatively high per capita income, which points towards large income inequalities. As with per capita income, the last two decades have witnessed fast decline in poverty in Kerala and relatively modest ones in other states. However, overall, as with per capita income, the association between poverty level and child labour appears to be rather weak over the entire period under consideration.

Finally, as we can see from table 3, Kerala reveals significantly higher literacy rates for total population, as also for females as compared to Punjab, Maharashtra and AP

from the very beginning. Statistics on social consumption, for instance, full immunization of children as well as poor families availing food grains at subsidized rates from PDS render further support to the importance of overall social development in this regard. As can be seen from the table, Kerala and Punjab perform better on both counts as compared to Maharashtra and AP. For example, while the percentage of poor who did not hold a ration card for subsidized food grains stand at 10 and 16 per cent for Kerala and Punjab respectively, the same is much higher in Maharashtra and AP that evince figures close to 19 and 24 per cent respectively.

Next, let us look into one particularly critical economic factor in determining child labour in India, viz. agricultural wages, given that the share of the agricultural sector in rural *employment* is large by any standard, and in all states and it is likely to have the strongest influence on child labour decision outcomes of households. To begin with, farm households in Kerala and Punjab are significantly better off economically compared to their counterparts in Maharashtra and Andhra Pradesh as revealed by the figures on the share of agriculture in GSDP and percentage of rural workforce (table 4). Thus, income per household in the agricultural sector is expected to be much lower in the latter state as compared to the former. The same argument holds for Kerala when compared with Maharashtra and Andhra Pradesh, albeit the difference in the economic conditions of agricultural households between the former and latter states appears smaller. In fact, all this agrees well with the long term trends and difference between the states in agricultural wages. Kerala and Punjab reveal higher real agricultural wage as compared to Maharashtra and AP throughout this period (table 4).

Table 3
Major Economic and Social Development Indicators, Selected States: 1961 to 2011

<i>Indicators</i>	<i>Kerala</i>	<i>Punjab</i>	<i>Maharashtra</i>	<i>Andhra Pradesh</i>
I. Per capita Net State Domestic Product (Constant prices)				
1960-61	509	790	745	530
1969-70	574	1072	774	534
1980-81	1508	2674	2435	1380
1990-91	1815	3730	3483	2060
2004-05	31871	33103	36077	25959
2013-14	58961	49529	69097	42170
II. Growth Rate of Real Per Capita Income (% p.a.):				
1960s	1.13	2.96	0.37	-0.17
1970s	0.31	2.34	2.41	1.60
1980s	1.60	3.21	3.31	3.71
1990s	3.89	2.21	3.27	3.52
2004-14	6.34	4.11	6.71	4.97
III. Poverty (Head Count Ratio)[§]				
1970s	56.9	21.5	47.7	54.9
1983	40.42	16.18	43.44	28.91
1993-94	25.43	11.77	36.86	22.19
2004-05	19.7	20.9	38.1	29.9
2011-12	7.1	8.3	17.4	7.2

contd. table 3

Indicators	Kerala	Punjab	Maharashtra	Andhra Pradesh
IV. State Human Development Index Value (ranking among 15 major states)				
1981	0.500(1)	0.411 (2)	0.363 (3)	0.298 (9)
1991	0.591 (1)	0.475 (2)	0.452 (4)	0.377 (9)
2001	0.638 (1)	0.537 (2)	0.523 (4)	0.416 (10)
2007-08**	0.790 (1)	0.605 (5)	0.572 (7)	0.473 (15)
V. Literacy Rate (Female Literacy Rate)				
1961	46.8 (38.9)	24.2 (14.1)	29.8 (16.8)	21.2 (12.0)
1981	81.6 (75.6)	33.7 (39.6)	39.2 (41.0)	24.6 (24.2)
2001	90.9 (87.7)	69.6 (63.4)	76.8 (67.3)	60.5 (53.6)
2011	93.9 (91.9)	76.6 (71.3)	82.9 (75.4)	67.6 (59.7)
2001 (<i>Rural</i>)	90 (86.6)	64.7 (57.5)	70.3 (58.4)	54.5 (43.5)
2011 (<i>Rural</i>)	92.9 (90.7)	72.4 (66.4)	77.1 (67.3)	61.1 (52.1)
VI. Social Consumption				
<i>Percentage of children 12-23 months fully vaccinated</i>				
2004-05	75.3	60.1	58.8	46.0
<i>Percentage of poor having no Ration Card</i>				
2004-05	10.0	15.8	19.2	24.1
<i>Road length (in km.) per one lakh population</i>				
2011	602.7	303.9	365.3	281.1
VII. Social Development Index for Rural Areas (rank among 20 major states)				
1991	69.55 (1)	49.92 (3)	32.26 (7)	29.99 (12)
2001	68.73 (1)	57.59 (3)	40.16 (10)	40.22 (9)
2005	72.57 (1)	57.41 (5)	42.92 (11)	48.62 (9)

Sources: Basic Road statistics of India 2012; Economic Survey of India, various years; Selected Socio-Economic Statistics, India, various years; Rural Development Statistics, 1991

Note: The Social Development Index is a composite index consisting of six component indices measuring achievement in the areas of Demography, Health care, Basic amenities, Education, Unemployment and poverty, and Social Deprivation.

* 2004-05 and 2011-12 calculated using Mixed Reference Period ** ranking among 21 major state

Further, it is interesting to note that whereas Kerala reveals slightly lower wages than Punjab, during the 1960s and 1970s, agricultural wage rate in Kerala surpasses that of Punjab since the beginning of the 1980s. It should be remembered here that the high wages in Kerala that are comparable to Punjab since the 1950s, have been realized under conditions of much lower increase in agricultural productivity and largely defy that made possible by improvements in labour productivity in the agricultural sector, as opposed to the case in Punjab. In fact, as pointed out by several researchers, this has been largely a result of the effort of trade unions in ensuring respectable wages for the agricultural sector (Oommen, 1975). Be that as it may, from the beginning of the 1980s at least, we find a high and almost perfect correspondence between agricultural wages and child labour incidence, with states that have higher wages revealing lower incidence of child labour and vice versa.

Going further, we would like to add that the relatively high agricultural wages during the last two decades in Punjab and Kerala have been associated with substantial increase in rural nonfarm employment (RNFE) overtime as indicated by several studies (see for instance, Sharma 2005; Venkatesh 2015). In fact, Kerala and Punjab- states that

have low incidence of child labour- evince relatively high shares of rural non-farm employment in total employment in the rural sector vis-à-vis Maharashtra and AP (Venkatesh et. al., 2015). This has helped to sustain high agricultural wages by tightening the market for rural labour through reducing the supply of labour to the agricultural sector. However, it should be mentioned here that even prior to the 1990s, agricultural wages were kept high in Kerala and Punjab, though the reasons differed. Outmigration of male workers to the Gulf from the end of the 1970s in Kerala and fast increase in labour productivity in the agricultural sector in Punjab during the same time, were largely responsible for the relatively higher wages in these states vis-à-vis Maharashtra and AP, states that failed to do so. Be that as it may, the upshot of the analysis is that a prerequisite for healthy growth of agricultural wages is the provision and availability of non-farm employment in the rural sector that largely demands similar skills from workers as required in the agricultural sector.

Overall, these findings points towards the strong possibility that there exists considerable influence of collective *social development* (reflected by overall education, health, availability of basic amenities etc.) on the occurrence of child labour that *weakens* the association between economic impoverishment and child labour (Herath and Sharma 2007). Thus, it comes as no surprise that overall we find a strong association between broad indicators of *social development* as captured by the Social Development Index (for rural areas) (table 3) and to a lesser extent by the HDI (which of course, includes per capita incomes as one of its components) and the incidence of child labour

Table 4
Agricultural Sector Indicators for Selected States: 1972-2000

<i>Indicators</i>	<i>Kerala</i>	<i>Punjab</i>	<i>Maharashtra</i>	<i>Andhra Pradesh</i>
I. Share of Agriculture in Rural Employment (%)				
1999-2000	42.3	62.7	82.3	78.5
2004-05	38.1	54.0	81.4	71.7
2009-10	33.5	51.1	78.5	69.0
II. Share of Agriculture in GSDP				
1999-2000	20.2	39.7	14.7	24.1
2004-05	14.2	31.1	8.3	20.6
2009-10	9.0	23.8	6.5	17.5
III. Average Daily Real Wage (Male)				
1956-57	1.54	2.29 [@]	1.34	1.25
1966-67	2.07	2.69 [@]	1.31	1.37
1971-72	2.32	3.38 [@]	1.33	1.49
1983 [#]	14.2	11.4	5.2	5.3
1993-94 [#]	21.8	19.3	10.5	9.7
1999-2000 [#]	30.6	20.2	12.3	12.5
IV. Growth rate of Agricultural wages (% p.a.)				
1956-1972	2.6	2.5	-0.05	1.10
1983-2000	4.6	3.4	5.2	5.2

Sources: Sharma, 2005; Venkatesh et. al., 2015

Note: Punjab and Haryana combined

[@] 1986-87 prices [#] Punjab and Haryana combined

(table 3). It is perhaps worth mentioning here that while Kerala retains the first position on the Social Development Index and incidence of child labour from 1991 to 2005, Punjab and Maharashtra appear to have slipped down in position on both counts during the same time (tables 1 and 3), underlining the crucial role of social development in reducing the incidence of child labour.

In fact, results of pairwise correlation and regression on incidence of child labour employing 17 major states corroborate the finding (Appendix 1). As we can see from the first column of Appendix 1A, pairwise correlations between the incidence of child labour and selected other variables reveal that among all the variables considered, the association between child labour and agricultural wages is statistically significant and that there is an inverse relation between the two. As expected, regression results with the same set of variables (independent variables) lend further support to the hypothesis that agricultural wages play a key role in determining the incidence of child labour in India (Appendix 1B). Also, among the other variables, literacy rate turns to be significant as well as observed in various other studies referred to in the preceding paragraphs.

Concluding Remarks

In the present study we critically analyzed the causes of divergence in the incidence of child labour among the good and bad performing states, with a view to understand the fundamental reasons behind the continuing existence of child labour in India. Moving away from the micro-econometric approach that characterizes most of the studies (especially those on India), we adopt a comparative study method, whereby we compare states that have evinced lower child labour incidence rates (specifically Kerala and Punjab) with those that reveal high child labour incidence throughout the period under consideration (specifically Maharashtra and Andhra Pradesh). Results indicate that collective social development in terms of education, provision of basic amenities and the like, are far more important as compared to increase in per capita incomes in reducing the incidence of child labour. This study illustrates that the State has an important role that encompasses much more than legislation (whose efficacy is debatable). Specifically, we argue that the role of governments may still be very important and could lie essentially in providing inputs for social development and keeping agricultural wages buoyant in rural areas by means of creating demand for unskilled labour mainly in off-farm activities. Other policy options towards attaining the same objective would of course be continued thrust on employment programmes for the rural poor such as the Mahatma Gandhi National Rural Employment Guarantee scheme. Also, the continued existence of workers' unions, as in Kerala, could act as buffer against depressed agricultural wages which could result in impoverishment of agricultural households and occurrence of child labour.

Notes

1. Official estimates, definitional differences aside, underestimate the incidence of child labour. While child work measured traditionally refers to only economically productive work (whether paid or unpaid), child labour has a broader connotation and includes all children

- who have been denied the right to education and childhood (Dev 2004). Also, the ILO definition of child labour does *not* include domestic chores, which apart from concerns of gender bias in definition, severely affects the measurement of work among girls in developing countries such as India (Ray 2000).
2. For an interesting exception to the poverty hypothesis that posits labour market imperfections as the main cause of child labour see Dumas (2007).
 3. It should be mentioned here that there data on agricultural wages are available from other sources such as Agricultural Wages in India reports and the NSSO. However, various data sources broadly agree on the trend and interstate differences in agricultural wages.
 4. One of the primary channels through which better health is expected to lower the incidence of child labour is via the impact on the ability of adult members to cut down staying home due to sickness and substituting child labour instead.

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APPENDIX 1A: CORRELATION MATRIX FOR 17 MAJOR STATES: 2001

	Child Labour	Agricultural Wage	Per Capita Income	Literacy Rate	Fertility Rate	Social Dev. Index
Child Labour	1					
Agricultural Wage	-0.4380*	1				
Per Capita Income	-0.127	0.4752*	1			
Literacy Rate	-0.4117	0.4830*	0.7093*	1		
Fertility Rate	-0.0418	-0.4317	-0.6738*	-0.7725*	1	
Social Dev. Index	-0.2869	0.8451*	0.7613*	0.7327*	-0.7315*	1

APPENDIX 1B: REGRESSION RESULTS FOR 17 MAJOR STATES: 2001

Dependent variable: Incidence of child labour

Prob. > F = 0.0341
 R-squared = 0.6887
 Root MSE = .86376

Independent variables	Coefficient	t	P>t	[95% Conf.Interval]	
Agricultural wage rate	-0.19*	-1.86	0.100	-.4230671	.0454043
Per capita income	-.000	-1.10	0.302	-.0002856	.0001008
Poverty (HCR)	-0.09	-1.63	0.142	-.2251648	.0386605
Literacy	-0.10**	-2.03	0.077	-.2182214	.0137888
Total fertility rate	-0.77	-1.61	0.146	-1.892473	.3374131
Social dev. index	0.03	0.55	0.594	-.1183589	.1933114
Constant term	17.6	3.15	0.014	4.712699	30.43498

* 10% < p ** 5% < p



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