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EDUCATIONAL DEPRIVATION OF CHILDREN IN ANDHRA PRADESH
Levels and Trends, Disparities and Associative Factors

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ABSTRACT

In line with the perspectives of human capital, human development and human rights, this paper conceives education to be the basic right of children and re-christens all children who are not in school including child labourers and 'no-where children', as *educationally deprived children*. It examines the prevalence rate, trends, disparities and factors associated with the phenomenon of educational deprivation of children in Andhra Pradesh. The incidence of this deprivation is examined by using data sources available from Census and the National Sample Survey Organisation (NSSO).

In our analysis it is observed that the incidence of educational deprivation of children is coming down over the period, albeit at a slow pace. The state, during the 1990s, experienced a dramatic change in the decline in the incidence of educational deprivation of children. Children who live in rural areas, who are female by gender and belong to SC/ST social groups are relatively the most disadvantaged. It seems that the location effect dominates the gender and caste effects and the interaction of these factors affects the chances of schooling crucially. The district level analysis shows that the leaders and laggards of educational development during pre-independence or pre-state formation retained their relative positions in the early phases of post-state formation period but these positions changed by the year 1991. Few districts from the backward regions were catching up, rising to the positions of the districts in the developed region and even forging ahead. Nevertheless the regional averages show that the historical legacy of educational development/ backwardness still holds. Finally, it is observed that the phenomenon of child deprivation is a rural phenomenon closely associated with agrarian economy.

Key Words: Andhra Pradesh, Child Schooling, Educational Deprivation of Children, Child Labour

JEL Classification: I2, I20, I28, R12, J21, J23

I. Introduction

Child labour is one of the severe problems faced by developed and developing economies. In developed nations, this problem was highlighted, discussed and debated during the Industrial Revolution and in the developing countries, it has attracted attention in recent past especially in the light of Harkinson Bill of USA, ILO Labour Standards and WTO Social Clause (see, Basu, 1999). Whatever be the motives behind these international organisations' deliberations, there is a common understanding that child labour has negative impact in both normative and pragmatic perspectives, on the child's growth and development. Therefore, it is a phenomenon that should be eliminated. In the normative perspective, every child should enjoy childhood, schooling and therefore should be work-free (Lopez-Calva, 2000). In the pragmatic perspective, the nature of work and working conditions impedes the growth and development of children.

The problem of child labour is a segment of stifled childhood (Chaudhri, 1997). It is universally accepted that education is a basic right of every child (UNCRC, 1989) and he / she should have access to it. In this rights framework, children who are not found attending the school – whether they are idle, reported as working or working but not reported as working – are all deprived of their right to education[1]. It is

said that many of them are working. Even if they are not doing so at the moment, they are potential workers and at any moment they may slip into the realm of work. Hence, the phenomenon of child labour or (we may say) educational deprivation of children has far-reaching implications in the perspectives of human capital, human development and human rights[2]. This problem is quite severe in India. Hence, the incidence of educational deprivation of children in India is worth examining in terms of its magnitude, trends, dispersion and causal factors.

The present paper focuses on this problem in a regional setting i.e. in Andhra Pradesh - a South Indian state. In India, as per 1991 census, about 50 per cent of children including 9 percent of working children, in the age group 5-14 were out of school. There have been wide variations across states with respect to both child labour and educational deprivation of children. Andhra Pradesh is one of the Indian states notorious for child labor and educationally deprived children with levels more than the national average. Though the state has performed moderately in economic spheres, its performance in socio-economic aspects like education especially literacy and schooling has remained far from satisfactory.

In this context, this paper aims to bring forth three main issues. F*irstly*, it examines the level of educational deprivation among the children and its dispersion across sub-population groups differing by spatial and socio-economic characteristics. *Secondly*, it brings out the household characteristics of educationally deprived children. *Thirdly*, it explores the relationship between the educational deprivation of children and the agrarian economy. With these objectives, the paper is arranged into nine sections. Starting with an introductory section, the conceptual framework of child labour and educationally deprived children along with data sources is discussed in the second section. The third section

presents the magnitude and dispersion of educational deprivation among children in Andhra Pradesh at the macro (i.e. the state) level while in the fourth section, the same has been discussed at the disaggregate (i.e. the district) level. Household characteristics of the educationally deprived children are described in fifth section. It is followed by an exploration of the association between educational deprivation of children and agrarian economy in sixth section. The seventh section discusses supply side factors – physical access and quality - of schooling. The relationship between socio-economic indicators and the incidence of educational deprivation across districts of Andhra Pradesh is examined in the eighth section and the final section concludes.

II. Methodology and Data Sources

a. Conceptual Framework: Referring to Out of School Children

Though a vast literature in both the empirical and theoretical streams (see, Burra, 1995; Basu, 1999; Baland and Rabinson, 2000) related with child labour is coming up, hitherto, there has been no consensus over the concept and thereby the magnitude[3], determinants and policy. These are debated issues. Though some unanimity has been reached on the concept of child, the issues of child work and labour are still unsettled.

In India, there are large numbers of children out of school in the age group 5-14. But, the statistics on working status of the children reveals that only a small fraction of children in this age group is working. It is assumed implicitly that a large residual of children, i.e. who are reportedly neither working nor attending school[4] is doing nothing. The recent studies pointed out that there is a large number of children who are in fact working, other than reportedly working or conventionally defined child labourers (Weiner, 1994; Burra, 1995). An extreme position is taken by activist-researchers like Sinha (2000) and Burra (1995) among others

who refer to all out of school children as child labourers on the basis of their argument that it is impossible to keep children idle in developing countries like India.

However, referring to all out of school children as labourers is not a sound proposition. It is again debatable. We put forward some points. *Firstly*, it implies that the child labour and schooling are mutually exclusive activities; thus it considers school going children to be not working. There is evidence, however, that school-going children are often also working[5] (see, Grooteart and Patrinos, 1999). *Secondly*, there are children who are disabled or unhealthy[6]. One cannot say that these children are working. *Thirdly, the* parents' perceptions of the age at which a child should be send to school may differ. The parents reported in a survey[7] that the child (especially younger one) is not attending school because it is too young to do so. In the light of parents' perception, it is doubtful whether they keep the same child in work. *Fourthly*, the cause and consequence relationship between child work and child schooling is also a matter of concern. It is presumed that child work is the cause and educational deprivation is the consequence. The presumption has limited validity in the light of the fact that for some children child work is default activity (Bhatty, 1998). In the latter case it the educational deprivation of the children that throws them into the realm of work. Given these considerations we redefined all those out of school children as *educationally deprived children* rather than child labourers on the basis of the normative approach by which every child should be work-free as he/she is supposed to attend school (Lopez-Calva, 2000). Moreover, it is agreed that all out of school children are deprived of education which is their basic right (UNCRC, 1989).

b. Analytical Framework

We follow the supply-demand framework to examine the phenomenon of educational deprivation of children. It implies that the

levels of child schooling of the region/state/nation depend upon its supply and demand factors with respect to schooling. In other words, one may say, the phenomenon of educational deprivation of children arises out of lack of or inadequate demand[8] for and inadequate supply of schooling[9]. Demand, in general, arises out of willingness and affordability and these in turn depend upon the perceived values of education and costs of schooling, both direct and indirect (opportunity cost of schooling i.e. forgone benefits out of child work). As regards to supply[10] of schooling, it may be seen in terms of availability of and access to and the quality of schooling. However, the supply of schooling is a necessary but not sufficient condition for increasing the levels of schooling. The socio-economic conditions at the household level and its location are of paramount importance in raising demand for child schooling (Krishnaji, 2000).

c. Measures of Prevalence and Dispersion

The magnitude indicates severity of the problem whereas the dispersion reflects spatial and social group inequality. Here, we have attempted to capture the severity of educational deprivation among children with a *deprivation index* that is a ratio of number of children out of school in the age group 5-14 to the total child population in this age group[11]. We, following Jayaraj and Subramanian (2002), have used the *relative disadvantage index*[12] to highlight dispersion among the sub-population groups differing by their spatial and social group characteristics especially in terms of location, gender and caste. The positive sign indicates the relative disadvantageous position of the particular group and the negative sign indicates the relative advantageous position (Jayaraj and Subramanian, 2002).

d. Data Source

In the following analysis, estimates of incidence of educational deprivation of children in the age group 5-14 drawn by using data[13]

sources from the Census and National Sample Survey Organisation (NSSO). The Census Socio-Cultural tables and NSSO's Employment and Unemployment Survey provide information on children by their age and activity status[14]. Here, the analysis of educational deprivation of children is based on the Census data for the period 1961-91 for the state as well as districts. The main limitation of the Census is that it does not provide data on the household characteristics – a factor of vital importance due to household being the basic decision-making unit of child schooling. But the NSSO fills this gap[15]. So, we used NSSO's 50th (1993-94) and 55th (1999-2000) rounds (central sample) unit level record data for Andhra Pradesh. The survey records usual activity status of every person covered in the survey. In fact, the survey also records the current attendance status in educational institutions especially for persons below 30 years of age. Thus one can use either usual activity status or current attendance status to know whether a child is in school or not. Here, we have preferred to use usual activity status instead of current attendance status. The reference period for usual activity and current attendance status are different. For the former it is one year and for the latter it is at the time of survey. The child schooling status for the major part of the year is known by usual activity status. Moreover, our estimates refer to the principal usual activity status of children in the age group 5-14 years, which implies that we did not consider the usual subsidiary activity status of the children. In fact, hardly we found that a child is attending school as a subsidiary activity.

III. Trends and Composition of the Incidence

a. Child Population

During 1961, there were 9.2 million children in 5-14 age group in Andhra Pradesh. It increased by 80 percent in 1991 and reached at 16.5

million - around 70 percent of which live in rural areas and the rest in urban areas. The urban share of children increased from 17.9 per cent in 1961 to 26.6 per cent in 1991. The share of child population to the total population remained around one-fourth over the period 1961-91[16].

b. Trends and Composition

In Andhra Pradesh, in 1961, 2.5 million children of 5-14 age group were in school and the rest were out of school. By 1991, both the number of children attending schools as well as out of school increased to 8.1 and 8.4 million respectively. While a rapid growth (220 per cent) was registered by the number of children going to school during 1961-91 period, the number of deprived children made marginal increase (just 25 per cent from the initial level). However, in 1991, the incidence of educational deprivation of children in this age group is at an alarming level. Table 1 presents the incidence (in terms of percentage) of working children and educationally deprived children in the age group 5-14. From here, it can be inferred that the rate of change shown by declining percentage of reportedly working children is much significant compared to that of the total deprived children and the same applies to both rural and urban areas.

A phenomenal decline can be observed during the 1990s. The NSSO (1999-00) estimates indicate the incidence at 23 per cent. Interestingly, the state average is found to be below the national average for the first time. Andhra Pradesh has been the one of the educationally backward states, revealed by its position on literacy and schooling fronts, among all major Indian states and this dramatic change during the 1990s may be termed as a remarkable turn in the history of child schooling of the state.

Table 1: The Incidence of Child Labour and Educational Deprivation of Children in Andhra Pradesh: 1961-2001

Year	Estimated No. of Children	Total		Rural		Urban	
		Child Workers	Deprived Children	Child Workers	Deprived Children	Child Workers	Deprived Children
1	2	3	4	5	6	7	8
1961	9.2m	20.8	72.3	23.7	76.9	7.4	51.2
1971	-	14.0	72.7	16.2	78.4	4.9	48.2
1981	-	12.4	59.5	14.8	66.5	4.2	35.8
1991	16.5m	9.2	50.2	11.5	56.2	3.0	33.6
1999-2000	17.34m	-	23.3	-	27.8	-	14.3

Note: **1**. Figure refers to children in the 5-14 age group; **2**. Data presented in Col. 3-8, are percentages; **3**. For 1981 and 1991 Census, 'Workers' includes both main and marginal workers; **4**. Deprived children includes child workers and no-where children; **5**. For the year 1999-2000 the estimations are drawn from NSSO 55th Round.

Source: **1**. Census of India (1991); **2**. Chaudhri, D P (1997); **3**. Estimated Using NSSO (1999-2000) 55th Round unit level record data.

But rural-urban gaps persist. The percentage of children working as well as educationally deprived remained high in rural areas (see Table 1). Moreover, there was a significant level of gender disparity with respect to educational deprivation of children[17]. The percentage of deprived female children was significantly higher than their male counterparts. The disparity was high among rural children. There is evidence to show that in urban areas the difference in the share of the deprived between boys and girls had been sharply narrowing but it was not in the case for the rural children. There exist differences among social groups also. In Andhra Pradesh, the incidence of child deprivation is higher among SC/ ST families than *Others*. Between SCs and STs, the latter recorded high incidence of child deprivation. Not only this, the difference in terms of levels of educational deprivation between ST and others has widened over the period 1981-91.

To examine the incidence of child deprivation and inequality, and thereby the relative disadvantage or advantage of sub-population groups differing by their spatial and social characteristics, we took 12 mutually exclusive and completely exhaustive population sub-groups by location (rural and urban), gender (male and female) and caste (SC, ST and Others). They are grouped as: Rural SC Males (RSCM), Rural SC Female (RSCF), Rural ST Males (RSTM), Rural ST Female (RSTF), Rural Others Male (ROM), and Rural Others Females (ROF). Similarly, these categories have been constructed for the urban population. Here, the inequality is measured in terms of the relative disadvantage of particular group with respect to their share in the total child population and the deprived children.

Accordingly, Table 2 shows the relative advantage or disadvantage of different population sub-groups of children by their spatial and social group character. The sign of the index indicates that children living in

Table 2: The Incidence of Educational Deprivation and the Relative Disadvantage of Children by their Spatial and Social Group Character (Location, Caste and Gender) in Andhra Pradesh: 1981-91 Census

Social Groups	1981 Census				1991 Census			
	Population Share	Relative Disadvantage	Rank	Incidence of Deprivation	Population Share	Relative Disadvantage	Rank	Incidence of Deprivation
1	2	3	4	5	6	7	8	9
UOM	10.1	-0.716	1	29.9	11.8	-0.413	1	30.5
USCM	1.2	-0.613	2	34.1	1.5	-0.323	2	34.9
UOF	9.9	-0.449	3	40.9	11.3	-0.291	3	36.5
USTM	0.2	-0.286	4	47.5	0.3	-0.112	6	45.3
USCF	1.1	-0.261	5	48.5	1.4	-0.154	4	43.2
ROM	29.7	-0.123	6	54.2	27.4	-0.120	5	44.9
RSCM	6.5	0.002	7	59.2	6.9	0.092	7	55.3
USTF	0.2	0.194	8	67.1	0.3	0.171	8	59.2
ROF	29.2	0.353	9	73.6	26.4	0.215	9	61.4
RSTM	3.1	0.400	10	75.5	3.3	0.335	10	67.3
RSCF	6.0	0.455	11	77.8	6.3	0.477	11	74.3
RSTF	2.8	0.743	12	89.5	3.0	0.706	12	85.5

Note: **1**. The figures refer to children in the age group 5-14; **2**. Population share refers to the proportion of the child population in particular social group to the total child population; **3**. Incidence of Deprivation refers to percentage of educationally deprived children to the child population in particular social group;

Source: Computed from Census of India, 1981 and 1991.

rural settings were relatively more disadvantaged across gender and caste than their urban counterparts. It seems that the location effect dominates gender and caste effects. The severity of these effects increases further when these three effects interact. The values of index indicates that the children living in rural areas, female by gender and belonging to ST social group (RSTF) were most disadvantaged and the children living in urban areas, male by gender and belonging to non-SC/ST social groups (ROM) were relatively the most advantaged. The highest and the lowest levels of incidence were observed for children in RSTF and ROM groups respectively.

IV. Inter-district Disparity

Having observed the level, change and dispersion of educational deprivation of children across spatial and social groups at the macro (i.e. the state) level, we discuss the same phenomenon at the disegregate (i.e. the district) level. Before delving into the inter-district performance and disparities in contemporary Andhra Pradesh, it will be worth knowing briefly the historical experiences of educational development.

a. Historical Background

The state of Andhra Pradesh was formed in the year 1956 combining the Telugu speaking districts called Andhra drawn from erstwhile Madras Presidency and the region Telangana from Nizam's Hyderabad. At the time of the state formation, these two regions had different levels of educational and socio-economic development. Andhra region was comparatively better than the Telangana region in all aspects including education. However, non-Telangana region was not homogeneous in many aspects. Andhra consists of agriculturally prosperous coastal Andhra and drought-prone Rayalaseema – a backward region in terms of its socio-economic and educational development. Also, within coastal Andhra, the northern districts were more backward than

the southern districts. Though much of the progress is limited to agriculturally prosperous coastal regions especially southern districts, within Andhra, the average achievement was above that of Telangana[18]. For instance, as per 1951 Census estimations the literacy rate[19] in Telangana districts was below 9 per cent except Hyderabad and in two northern districts of coastal Andhra it was around 10 percent whereas in the southern districts of coastal Andhra (above 20 percent) districts of Rayalaseema (between 15-20 per cent) the level was high.

The educational advancement and backwardness of Andhra and Telangana regions can be explained by two historical factors. One, the educational policy of colonial government played a proactive role compared with that of the native Nizam government. Two, the agricultural prosperity[20] in the Andhra region responded positively to this policy and thereby substantial demand for education was generated (see Upendranath, 1994; Washbrook, 1973). The scenario was different in Telangana as it was backward in terms of socio-economic development thereby educational backwardness. During the planning era, regionally balanced development with respect to social, economic and educational development was prioritised and the state took the proactive role in educational as well as other aspects of development. In this context one can see the performance (i.e. a change in terms decline in the levels of incidence) of regions and individual districts in these region and whether the educationally backward districts were catching up with the educationally developed regions.

b. The Level and Change

Table 4 presents the district-wise incidence of educationally deprived children for the years 1961, 1981, 1991 and 2001, the change over the period and the relative disadvantage index for the years 1981 and 1991. Before discussing the findings, three points are noteworthy. *Firstly*, the state consists of 20 districts for the 1961 and 1971 Census.

Three districts viz., Vizianagaram, Prakasam and Rangareddy, were formed during the 1970s so that separate figures for these districts are available since 1981 Census. *Secondly*, the comparison of figures for the year 2001 with the years 1961, 71 and 91 is not possible strictly, because the data sources are different. The 2001 figures have been obtained from the Education Department of Andhra Pradesh and the other figures from Census. The reliability and the problems involved with the data supplied by the Education Department is questioned (as in the case of MHRD data). Since Census estimations for socio-cultural tables for year 2001 are yet to come, we are providing it just to get a rough idea during the 1990's. The figures presented for the year 2001 include not only completely out of school children but also those who are irregular (very rarely attending) to school. Thus one cannot strictly infer about change observed during the 1990s. *Thirdly*, to capture the social group inequality across districts, the relative disadvantage index is constructed for each district for the years 1981 and 1991. It indicates the relative disadvantage of children especially living in rural areas, being female by gender, and children belong to SC/ST social group.

The pattern of educational development across districts in 1961 is that of the pre-independence and pre state formation (see Table 3). Across districts the lowest level of incidence was found in West Godavari (61 per cent) of Coastal Andhra barring Hyderabad (57 per cent) because of its cent-per-cent urban specificity. It was highest in Nalgonda (82 per cent) of Telangana, the state average being 75 per cent. There was almost 20-percentage points gap between the lowest level of incidence to that of the highest. It is also evident that in almost all the Telangana districts except Hyderabad, incidence was around 80 per cent or above and in all the Andhra districts including Rayalaseema incidence was below 75 per cent, except in Visakhapatnam. Within these non-Telangana districts two northern districts viz., Srikakulam and Visakhapatnam, of Coastal Andhra,

Table 3: The Level of Incidence of Educational Deprivation of Children Across Districts: Andhra Pradesh, 1961-2001

Region			Sno.	District	Incidence				Change			Ranks				Relative Disadvantage Index					
																Spatial: Rural		Gender: Female		SocGrp: SC/ST	
					1961	1981	1991	2001	61-91	81-91	91-01	1961	1981	1991	2001	1981	1991	1981	1991	1981	1991
1			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Andhra	Coastal Andhra	North	1	Srikakulam	74.9	63.3	53.9	16.1	21.1	9.4	37.8	11	13	16	6	0.366	0.346	0.263	0.193	-0.066	0.024
			2	Vizianagaram	-	63.6	55.6	21.2	-	8.0	34.4	-	14	18	13	0.362	0.361	0.263	0.174	-0.029	0.149
			3	Visakhapatnam	76.7	61.7	49.5	27.9	27.2	12.2	21.6	12	11	10	19	0.407	0.361	0.213	0.129	0.263	0.285
		South	4	East Godavari	66.7	56.2	51.8	21.1	14.9	4.4	30.7	5	7	13	12	0.306	0.241	0.085	0.055	0.012	0.080
			5	West Godavari	61.7	51.7	46.0	20.1	15.7	5.7	25.9	2	3	5	11	0.306	0.236	0.081	0.054	0.060	0.153
			6	Krishna	62.6	47.2	43.5	14.0	19.1	3.7	29.5	3	2	3	3	0.306	0.245	0.101	0.072	0.072	0.246
			7	Guntur	64.5	53.2	48.8	27.9	15.8	4.4	20.9	4	5	9	19	0.237	0.219	0.151	0.117	0.090	0.248
			8	Prakasam	-	56.6	51.5	26.5	-	5.1	25.0	-	8	12	18	0.320	0.351	0.266	0.183	0.059	0.247
			9	Nellore	68.3	53.8	47.2	34.2	21.0	6.6	13.0	6	6	6	21	0.344	0.335	0.174	0.126	0.245	0.253
	Rayala seema		10	Chittoor	72.0	52.5	39.5	10.5	32.5	13.0	29.0	8	4	2	1	0.386	0.256	0.224	0.160	0.198	0.188
			11	Cuddapah	70.5	57.9	43.9	14.3	26.6	14.0	29.6	7	9	4	4	0.333	0.230	0.289	0.203	0.227	0.264
			12	Anantapur	73.8	61.8	54.1	16.5	19.7	7.7	37.6	9	12	17	7	0.341	0.246	0.299	0.216	0.236	0.276
			13	Kurnool	74.0	64.3	61.8	36.1	12.2	2.5	25.7	10	16	21	22	0.283	0.283	0.278	0.209	0.147	0.218

cont'd

1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Telangana	North	14	Nizamabad	81.6	68.4	58.2	21.8	23.4	10.2	36.4	16	21	20	14	0.375	0.329	0.337	0.205	0.407	0.356
		15	Adilabad	81.6	73.2	57.2	19.3	24.4	16.0	37.9	18	23	19	8	0.371	0.364	0.372	0.216	0.381	0.243
		16	Karimnagar	80.9	67.8	48.4	15.1	32.5	19.4	33.3	15	20	8	5	0.414	0.432	0.357	0.213	0.299	0.270
		17	Warangal	80.7	64.7	52.9	19.8	27.9	11.8	33.1	14	17	15	9	0.496	0.432	0.303	0.190	0.398	0.368
		18	Khammam	79.4	63.6	51.4	22.8	28.0	12.2	28.6	13	14	11	16	0.502	0.467	0.218	0.142	0.392	0.363
	South	19	Mahabubnagar	81.6	72.6	67.0	46.5	14.6	5.6	20.5	17	22	23	23	0.419	0.487	0.330	0.243	0.409	0.439
		20	Rangareddy	-	59.0	48.2	12.5	-	10.8	35.7	-	10	7	2	0.433	0.319	0.243	0.120	0.289	0.311
		21	Medak	82.0	67.3	62.2	20.0	19.8	5.1	42.2	19	19	22	10	0.483	0.456	0.354	0.234	0.273	0.357
		22	Nalgonda	82.3	64.8	51.9	22.1	30.4	12.9	29.8	20	18	14	15	0.513	0.532	0.298	0.212	0.402	0.386
		23	Hyderabad	56.8	29.3	30.4	26.0	26.3	-1.1	4.4	1	1	1	17	-	-	0.114	0.078	0.134	0.086
Co-efficient of Variation (CV)				9.5	11.3	12.7	38.5	28.0	49.0	23.5	-	-	-	-	19.9	27.3	36.6	36.0	70.6	41.4
The State Average				74.5	61.1	52.0	22.1	22.5	9.1	29.9	-	-	-	-	0.387	0.337	0.212	0.146	0.237	0.269

Note: 1. Data presented in col. 4 -7 is percentage of children in the age group 5-14 not attending school to the total child population in the same age group;
2. Data presented for the years 1961-91 is of Census but for 2001 it is of Department of Education;
3. Col. 8 -10 change in percentage points between the specified years;
4. Col. 11-14, are ranks based on incidence level where district with least incidence of deprivation gets highest rank(1) and highest gets lowest rank(23).

Source: 1. Census of India, 1981, 1991, C-Series, Socio-Cultural Tables, C-4; 2. Department of Education, Andhra Pradesh, 2001.

and four Rayalaseema districts were relatively backward compared to the southern districts of coastal Andhra and relatively better-off compared to Telangana. The incidence level in the southern districts of coastal Andhra was below 70 per cent. While Rayalaseema districts were closely following south coastal Andhra, the two northern districts of Coastal Andhra remained just below Telangana districts.

Even after 20 years (i.e. in 1981), the dominance of coastal (especially southern) districts and the backwardness of Telangana districts in educational development continued (see Table 3). The average incidence declined in 1981 to 60 per cent. There was break up in Rayalaseema districts where two districts viz., Chittoor and Cuddapah were closely following southern districts of coastal Andhra and the rest two (viz., Anantapur and Kurnool) were lagging behind and joined ranks of Telangana districts. Adilabad of Telangana stood at the top of this list with a staggering 73 per cent of educationally deprived children. Excluding Hyderabad, the districts with relatively lower incidence of child deprivation were Krishna (47.2 per cent), West Godavari (51. 7 per cent), Chittoor (52.5 per cent), Guntur (53.2 per cent) and Nellore (53.8 per cent) respectively. Most of them are south coastal Andhra districts except Chittor. The districts with the shares of deprived children above 60 per cent (i.e. above the state average), were the three northern districts of Coastal Andhra (viz., Srikakulam, Vizianagaram and Visakhapatnam) and two of Rayalaseema (viz., Kurnool and Anantapur). Barring Hyderabad, all the 9 districts of Telangana continued to stand above the state average.

Over the period 1961-91 and 1981-91, all the districts experienced a change in terms of a declining trend in the incidence of educational deprivation of children except Hyderabad for the later period. In other words, the percentage of school going children in the child population has increased. The average level of incidence had come down to a little

over 51 per cent in 1991. A sharp decline in the deprivation levels occurred in those districts, which had high levels of deprivation at the initial stage. Districts like Karimnagar and Adilabad of the Telangana and Chittoor and Cuddapah of Rayalaseema experienced dramatic decline in the level of educational deprivation over the period. Interestingly, in 1991, barring Hyderabad it was not Krishna or West Godavari - districts from the agriculturally prosperous delta region - but Chittoor, a district from the backward Rayalaseema region, which showed the lowest levels of incidence (39.5 per cent) in the state. Nevertheless all the southern coastal Andhra districts continued to exhibit lower incidence levels. By 1991, the districts like Chittor and Cuddapah of Rayalaseema and Karimnagar and Rangareddy of Telangana were catching up with the south coastal Andhra districts. However, three northern districts of Coastal Andhra along with two Rayalaseema districts viz., Kurnool and Anantapur, and the rest of the Telangana districts (except Hyderabad) continued to exhibit high incidence levels. Mahabubnagar emerged as one of the most backward districts in terms of child schooling with 67 per cent of educationally deprived children.

It seems that the dramatic change took place across all the districts during the 1990s. The figures for the year 2001 present remarkable changes in relative positions in terms of levels of educational deprivation across districts. The change during this period is higher than that during last 40 years across all the districts barring Hyderabad. Interestingly, districts from the backward regions of Rayalaseema and Telangana had low levels of educational deprivation. In other words, one can say that the districts from the developed regions lagged behind. Moreover, the relative advantage of Hyderabad district with respect its urban specificity disappeared. However, as the authenticity of the figures for the year 2001 is in question, one has to be cautious while interpreting it.

c. Is There Convergence across District/Regions?

In addition to the above analysis, a few important observations can be made from the Table 3. *Firstly*, the variation (shown by coefficient of variation) across districts increased over the period. However, the relative positions of the districts have changed. The leaders and laggards in terms of educational development during pre-independent or pre-state formation retained their relative positions in 1961. But the situation changed by 1991. *Secondly*, the rate of change in terms of decline in the level of educational deprivation in backward districts (of Telangana and Rayalaseema) is higher than that of the developed districts (South Coastal Andhra). It could be due to low initial level of schooling in backward districts. Few of the districts from backward regions (Karimnagar in Telangana and Chittoor in Rayalaseema) were catching up the developed districts in southern Coastal Andhra by 1991, even forging ahead of districts in the developed region. Nevertheless, the regional level averages still show the differences where backward region still holds its characteristics (see Table 2 in Appendix). *Thirdly*, surprisingly a century old educational advancement of Coastal Andhra especially southern districts slowed down that made other districts from backward regions surpass them[21]. *Finally*, as the variation across districts was increasing one cannot say there was a convergence; rather it indicates the divergence.

d. Relative Disadvantage of Children: Living in Rural Areas and Being Female and SC/ST

There exist spatial and social group inequalities across districts. Table 3 also presents the relative disadvantage index for the children living in rural areas, being females by gender, and belong to SC/ST social group for each districts for the years 1981 and 1991. The positive values of the index for the children living in rural areas indicate that for both the years they were relatively disadvantaged in terms of education in all

the districts. Between the period 1981-91 it was showing a declining trend in many districts[22] but four districts viz., Prakasam, Mahabubnagar, Karimnagar and Nalgonda showed increasing trend. The relative disadvantage of rural children was high in the Telangana districts compared to rest of the districts (See Table 3). The variation in the level of relative disadvantage of children living in rural areas was increasing over the period 1981-91. Moreover, higher values of index for children living in rural areas when compared with the children who are female by gender and belonging to SC/ST social group indicate the prominence of more locational disadvantage than gender and caste. It is once again confirming our earlier finding at the macro level that the location effect dominates the gender and caste.

Turning to the gender dimension, the girls were more educationally deprived than boys[23]. The positive values of the index indicate relative disadvantage of girl children. The trend over the period 1981-91 declined across all the districts. However, when compared to the children living in the rural settings the relative disadvantage of girl children was relatively low across all the districts. Similar to the case of children living in rural setting the relative disadvantage of girl children was high in the Telangana districts. Another important observation is that the girl children were relatively more disadvantaged in backward districts compared to their counterparts in developed districts.

In the case of children belonging to SC/ST social groups, they were relatively disadvantaged in terms of education in all the districts. Interestingly, two northern districts of Coastal Andhra viz., Srikakulam and Vizianagarm, showed relative advantage for the year 1981 but by 1991 it disappeared. This trend over the period 1981-91 was increasing alarmingly evident in many districts but few Telangana districts showed a declining trend. However, the variation across districts in the level of

relative disadvantage was decreasing over the period 1981-91. It indicates the increasing homogeneity across districts of children belonging to SC/ ST social group with respect to educational deprivation.

V. Household Characteristics of Deprived Children

This section presents the household characteristics of educationally deprived children. As the household is the basic decision-making unit, its characteristics are of prime importance in influencing the schooling decision. Before getting into the analysis, a few points are noteworthy.

Firstly, the following analysis is based on NSSO 55th (1999-2000) and 50th (1993-94) rounds Employment and Unemployment Survey. According to our estimates based on NSSO (1999-2000), there were about 73.1 million total population (51.6 million in rural areas and 21.5 million in urban areas) in Andhra Pradesh with 23.5 per cent (17.3 million) of child population in the age group 5-14 (12.2 million in rural areas and 5.1 million in urban areas). *Secondly*, the estimates of educationally deprived children (5-14 age group) according to their household characteristics are based on principal usual activity status of the children. We have avoided the current attendance status and usual subsidiary status of the children for the estimations[24] . In fact there is not much difference in attendance status of the children between usual activity status and current attendance status[25] . The estimates based on principal usual activity status show that there were about 4.0 million children (3.2m in rural and 0.7m in urban) who are educationally deprived. It comprises 23.5 per cent (26.7 and 16. per cent in rural and urban areas respectively) of the total estimated children[26] .

Thirdly, in the following tables we used indicators like child/ population ratio, relative share of child population and deprived children, the incidence of educationally deprived children and relative disadvantage index. Child-population ratio implies the ratio of child population to the

total population in the particular category of households by their socio-economic characteristic. The relative shares of child population and deprived children indicate that the share of particular category of household to the total households. The incidence is the percentage of deprived children to the child population in each category of the households. Relative disadvantage index, as mentioned above, highlights given average levels of incidence, the relative advantage/disadvantage of children in each category of households[27] , with respect to their relative contribution to deprived children and child population.

a. Head of the Household

It is found that the sex of the household head does have an influence on educational deprivation of children in both the rural and urban areas. Around 8 per cent of the child population in both rural and urban areas belong to female-headed households (See Table 4). The relative shares indicate that children belong to female-headed households are over representing in deprived children when compared to their population share. It is more explicit for the children belonging to female-headed household in urban areas. The incidence of deprivation is higher in the female-headed households than the male-headed households in both urban and rural areas. The relative disadvantage index confirms that the children of female-headed households are relatively disadvantaged in terms of education irrespective of place of residence.

b. Adult Literacy Status of the Household

Literacy status of the household is a significant factor influencing educational deprivation of children. Illiteracy and ignorance limit people's access to available information[28] that may change the livelihood pattern in a better way. Likewise, the illiteracy and ignorance of parents affects the realisation of value of education for their children's lives. The available literature provides evidence that a household with at least one literate

Table 4 : Household Characteristics of the Educational Deprivation of Children in Andhra Pradesh : NSSO, 1999-2000

Household Characteristics	Child/Popn Ratio		Relative Share of Child Population		Relative Share of Deprived Children		Incidence of Deprivation		Relative Disadvantage	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11
Head of the Household			*100*	*100*	*100*	*100*	-	-	-	-
Male	23.8	23.4	92.5	92.1	91.6	89.1	26.9	14.1	-0.120	-0.380
Female	22.0	21.6	7.5	7.9	8.4	10.9	30.4	20.2	0.044	0.063
Adult Literacy Status			*100*	*100*	*100*	*100*	-	-	-	-
All are Illiterate	28.6	31.6	48.6	19.2	64.0	49.8	35.8	37.9	0.300	0.379
At least One is Literate	19.6	21.4	49.4	78.6	36.0	49.4	19.8	9.2	-0.265	-1.364
Adult Female Literacy Status			*100*	*100*	*100*	*100*	-	-	-	-
All Females are Illiterate	25.8	28.3	73.2	39.0	89.0	74.8	33.0	28.0	0.590	0.587
At least One Female is Literate	18.0	20.5	24.0	57.9	9.6	21.3	10.9	5.4	-0.219	-0.869

cont'd

Religion			*100*	*100*	*100*	*100*	-	-	-	-
Hindu	23.4	22.4	91.6	77.2	93.2	70.9	27.6	13.4	0.190	-0.276
Hindu Excl SC/ST	*22.7*	*21.3*	*62.0*	*59.1*	*56.6*	*49.7*	*24.8*	*12.2*	-0.142	-0.230
Muslim	28.2	28.1	5.3	19.8	4.9	26.9	24.9	19.7	-0.027	0.089
Christian	23.2	17.6	2.4	2.3	1.8	2.2	20.5	13.6	-0.091	-0.007
Others	24.2	18.4	0.6	0.6	0.0	0.1	0.0	1.6	-0.364	-0.139
Caste			*100*	*100*	*100*	*100*	-	-	-	-
ST	27.1	25.6	8.8	3.1	14.9	5.4	46.1	25.0	0.252	0.124
SC	24.7	26.3	23.8	16.2	23.6	17.6	27.0	15.8	-0.003	0.017
OBC	23.5	23.3	47.6	39.4	49.5	42.9	28.3	15.8	0.015	0.058
Others	21.4	22.0	19.9	41.3	12.0	34.1	16.4	12.0	-0.145	-0.123
MPCE Quintile Class			*100*	*100*	*100*	*100*	-	-	-	-
1- Bottom 20 %	29.3	30.4	29.4	31.8	37.4	63.4	34.5	29.0	0.113	0.463
2	27.0	22.9	26.1	21.9	28.5	18.9	29.7	12.5	0.033	-0.038
3	23.5	24.2	20.9	21.5	15.2	7.7	19.8	5.2	-0.099	-0.176
4	18.6	19.8	14.0	15.0	11.1	8.1	21.6	7.8	-0.075	-0.081
5 – Top 20 %	15.4	14.8	9.5	9.7	7.7	2.0	21.9	2.9	-0.069	-0.132

Note: **1.** Figures refers to the children in the 5-14 age group; **2**. Child population ratio is the ratio of children to the total population; **3**. Data presented in col. 2-9 are percentages and 10-11 is a normalised index; **4**. The average levels of incidence in rural and urban areas are 27 and 14 per cent respectively.

Source: Estimations from NSSO (1999-2000) 55th Round Employment and Unemployment Survey, unit level record data.

member is better-off than that of all illiterate members[29] . It is due to the positive externality effect of education (Basu et al., 1999). In case of child schooling or child labour, parents' education is said to be having great influence (Buragohain, 1997). However, many of the households in Andhra Pradesh are found to be having all adult members being illiterate. This proportion is higher in the state than the national average[30] (Subramanyam and Reddy, 2002).

In case of educational deprivation of children the incidence for households with at least one adult literate is lower than that of households with all adult illiterates (see Table 4). About 64 and 50 per cent of deprived children of rural and urban areas respectively belong to such households where all adult members are illiterates. Moreover, female literacy has a more significant impact on child schooling. Households with all illiterate female adults contribute to about 89 and 75 percent of the deprived children in rural and urban areas respectively. It is also evident from the NCAER survey that the school enrolment of children is very high in the presence of literate females in the households as compared to literate males in rural Andhra Pradesh[31] . Moreover gender disparity in schooling disappears in female literate households (See NCAER, 2001).

c. Caste and Religion

The inequality of social groups, between socially backward castes (SC/ST) and their counterparts (upward castes), is significant in any aspects of socio-economic development. It holds true for educational development also.[32] As we observed in the above analysis, the deprivation levels are high among the children belonging to socially backward classes of SC and ST. There we had only SC and ST castes for social group analysis. NSSO (1999-2000) survey records the Other Backward Classes (OBCs) in addition to SCs and STs. Surprisingly, the incidence level of educational deprivation among the children in OBC social group indicates

that they are no better than SCs. Rather they are relatively more disadvantaged in rural areas compared to the SC children (see Table 4).

As for religion, in contrast to one's expectation, the children belonging to Muslim community are less disadvantaged as compared to the Hindu community especially in rural areas. In fact elsewhere it was observed that the proportion of children missing the schooling experience is the largest in the Muslim community (e.g., see Appaswamy et al., 1999). NCAER (1994) survey shows that Muslims children are less disadvantaged in enrolment than the Hindu children in Andhra Pradesh (NCAER, 2001). Similarly our estimates show that in rural Andhra Pradesh even if SC/ST social groups are excluded from the Hindu community, they (Muslims) are relatively less disadvantaged (see Table 4). Only 5 per cent of the all population and 5.5 per cent of the child population belong to Muslim community in rural Andhra Pradesh[33] . The incidence of child deprivation in rural areas by religion shows that the highest incidence is among the Hindu children (40.7 per cent and when SC/ST are excluded it is 36.4 per cent) followed by Muslim (37 per cent) and Christian (29.1 per cent) children. The least incidence is observed for children belonging to *others* category (only 14.3 per cent). However, in urban areas the case is different. Here the children belonging to muslim community are relatively the most disadvantaged. In fact, a majority (above 50 per cent) of the muslim population in Andhra Pradesh live in urban areas.[34]

d. Monthly Per Capita Expenditure Class

Poverty is the most debated issue in the determinants of child labour and child schooling. There is a substantial literature supporting as well as contending the casual relationship between poverty and child labour or child schooling (see Sinha, 2000; Basu and Van, 1995; Lieten, 1999).

Though there is disagreement about the hypothesis that poverty is the only factor that affects the child labour or child deprivation, it is agreed generally that it is one of the important factors. In the Table 4 above, the quintile class is formed based on the monthly per capita expenditure (MPCE) of the household. Here, expenditure level is considered as proxy for income level of the household and it is presented in quintile classes of the total estimated households.

The figures presented in the table reveal that the relative share of child population and deprived children are declining from first to the last quintile (see Table 4). It implies that the average number of children (age group 5-14) and educationally deprived children per household are higher in households belonging to the bottom quintile and lower in top quintile households. In other words, they are inversely related. Moreover, income is observed to be an important factor influencing child schooling in urban area compared the rural areas. About 65 per cent of the deprived children belong to the bottom 20 per cent of the households. The incidence level in this class is high and significantly distinct from rest of the classes[35] . The value of relative disadvantage index shows that the disadvantage of children in the bottom 20 per cent expenditure class households is high in urban areas compared to the rural ones. It shows that there is a systematic negative relationship between the incidence of educational deprivation and per capita expenditure level. However, the relationship is not much robust in rural areas. In rural areas the bottom two quintiles show distinction with respect to the rest of the quintile classes in the higher order. But three quintile classes in the lower order from the top reveal similarity in terms of incidence level. It shows a paradoxical situation[36], a wealth paradox, between income and the educational deprivation of children. It indicates that we ought to look beyond income levels, especially in rural areas.

VI. Educational Deprivation of Children in (Rural) Agrarian Economy

In this section we will focus on rural agrarian economy and establish a relationship between educational deprivation of children and the agrarian economy. At the outset we say that the problem of educational deprivation of children is primarily a *rural phenomenon* and it is further a *product of agrarian economy*. Based on 1991 Census, we observed that out of the total child population (5-14 age group), 73 per cent reside in rural Andhra Pradesh. Its contribution to the total deprived children was as high as 82 per cent[37] . The analysis of the relative disadvantage of children by their spatial and social group characteristics indicates that the rural children are the most disadvantaged. The district level analysis shows that districts that perform well in terms of decline in the incidence level in rural areas also did well in overall levels (rural and urban) over the period especially between 1981-91 (Venkatanarayana, 2003). Within the rural areas, around 70 per cent of the total children are located in the household with agriculture as the principal source of livelihood (both Self-employed in Agriculture and Agricultural labour households). Their share in total deprived children is around 80 per cent (our estimates based on NSS 1999-2000).

It is observed in the Table 5 that the agriculture labour households contribute the lion's share of deprived children compared with rest of the households and the incidence of educational deprivation is the highest for these households[38] . It seems that the performance in terms of decline in the incidence of deprivation is low for the households whose principal source of livelihood is agriculture when compared with that of non-agricultural households between the two points of time (i.e. 1993-94 and 1999-2000). The proportion of children belonging to agricultural households to the total deprived children has increased from 77 per cent to 79 per cent between this period. The children belonging to agricultural

Table 5: Educational Deprivation of Children and the Principal Livelihood Source of the Household in Rural Andhra Pradesh: NSSO 1993-94 and 1999-2000

Principal Livelihood Source of the Household	Child/Pop Ratio	Relative Share of				Incidence of Deprivation		Relative Disadvantage	
		Child Population		Deprived Children					
	1999-00	1993-94	1999-00	1993-94	1999-00	1993-94	1999-00	1993-94	1999-00
1	2	3	4	5	6	7	8	9	10
1. Agricultural Labour	24.6	39.5	44.1	49.0	53.2	50.0	32.2	0.241	0.163
2. Self-employed in Agriculture	21.6	31.0	27.1	28.1	25.7	36.5	25.4	-0.054	-0.019
3. Other Rural Labour	25.4	9.1	6.7	9.0	5.9	39.9	23.6	-0.007	-0.037
4. Self-employed in Non-Agriculture	23.6	15.1	14.4	12.5	11.2	33.3	20.8	-0.086	-0.058
5. Others	23.9	5.3	7.7	1.3	4.0	10.0	13.9	-0.084	-0.078
Total	23.3	100	100	100	100	40.6	26.7	-	-

Note: **1**. Figures in Col. 2-8 are in Percentages; **2**. Figures refers to children in the age group 5-14; **3**. The estimations of educationally deprived children are based on Principal Usual Activity Status of NSSO.

Source: Estimations from NSSO 1999-2000 (55th Round) and 1993-94 (50th Round) Employment and Unemployment Survey, unit level record data.

labour households are relatively the most disadvantaged[39] but the level of disadvantage is declining over the period. This decline coincides with increasing real wage rate[40] for agriculture labour during the 1990s.

Certainly, socio-economic conditions influence child well-being in general and child schooling in particular. As the majority of people live in rural areas and agriculture is the main source of livelihood for 70 per cent of the population, rural and agricultural development leave an impact either directly or indirectly on child schooling. But it may also depend up on the region-specific agrarian relations and conditions, landholding structure, cropping pattern, irrigation and other infrastructure facilities, and linkage with non-agriculture sectors as well as urban specificities. Historical experience also shows that with the advent of irrigation and other infrastructure development in the Krishna-Godavari deltas, agricultural prosperity ushered from the 1850s onwards (see Rao and Rajasekhar, 1991; Rao, 1985; Rao, 1988), in turn led to a rise in the demand for education. The typical example is of the 'Rate School' system (Upendranath, 1994)[41]. Similarly, agricultural development especially commercialisation and land reforms were one of the catalyst factors in Kerala's educational achievements (see, Tharakan, 1984). In contemporary India, in the semi-arid regions such as the ICRISAT Villages child schooling significantly responds to seasonal fluctuations due to external shocks like drought and rainfall failures (Jacoby and Skoufia, 1997). The NCERT (1993-94) survey on human development in India showed very low enrolment rates among children of the landless labourers. This enrolment rate increased with landholding size[42]. It means that the incidence of educational deprivation of children is high among landless labour households followed by size class of holdings from marginal to the large.

VII. Supply Side Factors: Access to and Quality of Schooling

Though household characteristics such as above mentioned, are not the only factors contributing to child deprivation. It is observed in the context of child labour that the overall conditions of the educational system could exert powerful influence on the supply of child labour (Grootert and Kanbur, 1995:193; ILO, 1998). The lack of access to 'relevant and quality' education is one of the factors causing prevalence of child labour (Canagarjah and Coulombe, 1997). It is observed that in many instances children work simply because there is no access to school due to the unavailability of schools in the vicinity (Siddiqi and Patrinos, 1995). Therefore, one of the necessary conditions for the efficiency of the school system is the geographical accessibility as well as availability of a school to the children of the relevant age group.

Table 6 : Physical Access to School - Percentage of Habitation Having Schooling Facility within their Habitation in Andhra Pradesh (1957-93) : AIES

Survey	Year	Primary Section		Upper Primary			
		Served within Habitation		Served within Habitation		Up to 3 Km.	
		H	**P**	**H**	**P**	**H**	**P**
1	2	3	4	7	8	9	10
I	1957	44.8	81.1	2.2	-	-	-
II	1965	60.8	90.7	6.1	25.7	-	-
III	1973	61.1	87.5	9.3	31.3	47.4	64.6
IV	1978	64.0	91.8	10.2	36.0	53.4	71.2
V	1986	67.8	93.3	13.5	40.7	63.5	79.2
VI	1993	69.7	92.5	13.8	43.0	65.4	79.4

Note: **1**. In first two surveys distance was measured in miles for later surveys it was in kilometres; **2**. **H** – Habitations Served; **P** – Population served.

Source*:* Directorate of School Education, Hyderabad, Andhra Pradesh.

a. Availability of and Access to School

Table 6 shows the percentage of habitations and the percentage of total population served with educational facility at their nearest distance. It is said that a school (at least a primary school) should be at a walkable distance of children i.e. 1km for primary school and 3 km for middle school. In Andhra Pradesh, it seems that the physical access to primary schools is not a problem where over 90 per cent of the population is served with a primary school/section within their habitation (See Table 6). It is also observed that the state is better than the all India average in terms of physical access to school (Reddy and Rao, 2003).

However, the elementary education (for the children in the 5-14 age group) goes beyond primary schools. Here middle schools are included in the elementary education. For middle schools the access within the habitation is limited to below 50 per cent of the population. But as it is said that up to 3 km is the walkable distance[43] for middle school age children, then it covers 80 per cent of the population (see Table 6). Infrastructure facilities like roads and transportation matter when children those who have to reach far-away schools.

It is evident across districts also. Above 85 per cent of population is served with a primary school/section within their habitation except Chittoor (see Table 7). In this district, primary schools within a distance of one kilometer serve above 85 per cent of the population. The variation in terms of access to primary school within the habitation across districts over the period is declining. Though the population served by middle schools within the habitation was less than 50 percent, but within the range of 3km distance, it covers above 70 per cent except in a few districts (see Table 7). The variation across districts is declining over the period for middle schools. The variation is high for middle schools compared to primary schools. The availability of schools across districts for the children in the age group 5-14 is moving towards a less unequal situation although there are still disparities.

Table 7: Access to School (Pop Served by Elementary Section of the School) Across Districts in Andhra Pradesh: All India Educational Survey (AIES)

Region		Sno.	Districts	Population Served Within the Habitation						Within 3 Kms	
				Primary			Upper Primary			Upper Primary	
				1965	1978	1985	1965	1978	1985	1978	1985
1		2	3	4	5	6	7	8	9	10	11
Coastal Andhra	North	1	Srikakulam	90.0	91.0	92.1	19.3	24.0	25.0	67.0	75.9
		2	Vizianagaram	-	-	95.5	-	-	35.1		81.4
		3	Visakhapatnam	86.9	86.4	85.3	16.8	22.5	34.2	58.0	58.8
	South	4	East Godavari	94.6	95.9	93.3	25.8	40.0	43.5	83.5	83.3
		5	West Godavari	97.4	98.5	97.8	32.9	41.9	21.5	86.8	91.0
		6	Krishna	97.3	98.9	98.7	40.9	49.1	43.5	84.4	90.8
		7	Guntur	98.6	99.5	96.8	35.6	48.2	51.5	77.9	84.4
		8	Prakasam	-	96.9	94.8	-	35.3	42.7	64.1	76.1
		9	Nellore	91.0	93.0	95.5	27.2	29.2	33.6	68.2	73.6
Rayala seema		10	Chittoor	64.7	66.3	76.7	13.5	18.4	21.7	73.6	78.2
		11	Cuddapah	84.0	86.4	85.7	18.7	26.3	30.3	65.2	75.1
		12	Anantapur	90.6	91.9	95.0	17.9	28.5	33.1	53.0	64.7
		13	Kurnool	98.9	99.3	98.9	26.2	40.3	44.0	59.6	67.1

cont'd

1		2	3	4	5	6	7	8	9	10	11
Telangana	South	14	Mahabubnagar	92.5	92.8	96.5	27.4	49.3	49.3	68.4	78.8
		15	Rangareddy	-	93.3	94.7	-	39.6	51.7	74.5	89.0
		16	Hyderabad	93.9	-	-	31.1	-	-	-	-
		17	Medak	95.3	96.6	94.3	29.8	37.8	45.7	71.1	76.4
		23	Nalgonda	89.9	90.9	94.1	27.4	41.3	50.9	70.7	79.4
	North	18	Nizamabad	93.4	94.0	94.7	25.9	45.8	56.2	77.2	90.0
		19	Adilabad	82.6	90.9	89.3	13.4	36.0	33.7	51.7	69.2
		20	Karimnagar	92.0	96.5	90.1	28.2	44.4	54.1	82.6	86.2
		21	Warangal	93.1	90.9	92.4	21.1	41.9	54.9	80.0	91.4
		22	Khammam	81.3	81.0	86.5	25.0	35.9	41.1	72.2	74.5
Co-efficient of Variation				8.7	8.2	5.7	28.6	24.4	26.3	15.2	11.4
Andhra Pradesh				90.7	91.8	92.7	25.5	26.2	40.7	71.2	79.2

Note: **1**. '–' Not Available; **2**. For the year 1965 Hyderabad has rural area but during 1970's rural areas of Hyderabad separated out and formed districts i.e. Rabgareddy.

Source : **1**. All India Educational Survey; **2**. Upendranath (1994)

However, the access to even primary schools is limited for the children living in habitations with population below 500. Incidentally, these habitations are predominantly (above 50 per cent) inhabited with SC and ST population. It is reported[44] in 1989 that in the state only 35 per cent of the habitations with predominantly (above 50 per cent) ST population have primary schools within their habitation. Children from the other 25 per cent habitation have to walk up to 2 Km and that of another 40 per cent have to walk above 3 Km to reach the school (GOAP, 1992). It implies that neglecting the provision of physical access to school for the children in these habitations leads to an exclusion of ST children from the realm of education.

b. Quality of Schooling

The improved quality of education is as important as quantitative expansion of the education system (Raza and Nuna, 1981). There should not be any trade-off between these two aspects; if there is, it should be minimised. It is observed that though access is ensured, the poor quality of education often makes the parents think that attending school is a waste of time (Siddiqi and Patrinos, 1995). The poor quality[45] of schooling has a discouragement effect on parental motivation to send their children to school. Hence, it is said that the 'school success rates are partly result of efforts to stimulate parental demand for education, most notably by raising the quality of schools through the improvement of teacher training and in part by holding schools accountable to local authorities' (Weiner 1994: 178). Poor quality of schooling could be in many forms such as the lack of proper physical infrastructure facilities, inadequacy of teachers, teacher's truancy, poor administration, low quality of teachers and gross disinterest in the activities of the school, and lack of professional commitment of teachers. Many of these factors are not observable in quantitative terms. A few observations are made using observable indicators with respect to schooling.

i Infrastructure

A factor that greatly influences quality of schooling is physical infrastructure. Lack of infrastructure like pucca building, black boards, drinking water, play ground, urinals etc have an adverse impact on attracting the children in to the school as well as the quality of schooling. In India, despite the achievement of a satisfactory access for primary schools (a primary school within the habitation), the shortages of classrooms, inadequate teachers remained widespread. Many of the classrooms exist with poor maintenance and many schools lack water supply and adequate sanitary facilities (World Bank, 1997a). As regard to school infrastructure in Andhra Pradesh, though about 70 per cent of the primary schools had *pucca* building in 1993 many schools do not have more than one classroom and many of them do not have the necessary facilities like drinking water, urinals especially for girls.

ii Teachers: Quantity and Quality

Educational philosophy says that the teacher occupies a vital position in the education system even Education Commission (1964-66) emphasised it. The quantity as well quality of teachers is important in educational development. One of the indicators that show the number of teachers required serving the enrolled children is teacher pupil ratio. Higher the teacher-pupil ratio above normative or optimum level i.e. 1: 40, makes it difficult for the effective teaching-learning process as it places a undue burden on teachers (World Bank, 1997). It is so especially in the classrooms that combine many grades and ages. In Andhra Pradesh teacher-pupil ratio is higher than normative level[46] even for the enrolled children. Fifth All India Educational Survey reports that there were 30 per cent of primary schools with single teacher, another 42 per cent with two teachers in the state (DSE, 1997). It implies that majority of the schools are functioning with insufficient teachers. It is also observed

that the drop out rate is high in the schools with single teachers (GOI, 1987). One of the reasons attributed for girl children's inadequate attendance is the shortage of female teachers. In the state all over the period men outnumber women in primary school teaching. For instance, in 1991, the state has 34 per cent teachers who were women.

As regards to the quality of teachers, their attitudes, commitment, punctuality, and accountability are very important. Their quality is important not only in serving those who are enrolled but also in motivating parents of out of school children to send their children to school. However, in practices, the performance of teachers is not up to the mark. Government of India commissioned investigation in late 1980's in Andhra Pradesh observed teacher's poor performance (See GOI, 1987). The report described the teacher's commitment for educating the children where a minority of the teachers genuinely concerned with children's education, they are committed, and initiative. The other variety of teachers are of the helpless, though have feelings they don't have initiatives. And the third variety and majority were not interested in teaching, no commitment and indifferent towards children. Among these there were teachers who visit schools only two or three times a week (See GOI, 1987).

iii Growing Demand for Private Schools

There is growing demand[47] for private school in Andhra Pradesh especially since late 1980s. In the contemporary context it is well known fact that the quality in public (i.e. government) school is very poor. The growing perceptions and awareness about the value of education consequent quality consciousness and failure of public school in terms of meeting parents' expectation/aspirations led the increasing demand for private schools[48] . The failure of public school in maintaining quality is attributed to many factors from teachers to infrastructure. Given the

concern for quality, if they can afford, parents prefer private schools to public schools[49], when they could not afford some parents prefer to keep their children in work rather than in public school. An example is that under the state government's back to school programme an attempt was made to bring out of school children into formal schools. When I met a child who was brought back to school, I was told that:

> In fact he (the child) was going to a private school. His father is working as *hamali* (a type of casual labourer). Due to health and labour market tightness he is unable earn as much money as he was earning. As, he is unable to afford the cost of his child's education he withdrawn the child from the private school and made him toil in a workshop. The father's perception is that as the child learn nothing in public (i.e. government) school, keeping him there is waste of time. On the other hand, apprenticeship in a workshop may enable him to learn some skill useful in his adult life.

In the advent of new education policy (1985), the new programmes like OBB, APPEP and DPEP initiated a process of universalising elementary education. These programmes had focused on infrastructure, improving the quality of schooling and involving local community. However, they do not appear to be effective (Reddy and Rao, 2003). Thus, it can be said that ineffective education system operates as discouragement effect in terms of low enrolment rates and high dropout rate.

VIII. Correlates of Educational Deprivation of Children and their Implications

To eliminate the problem of educational deprivation of children and promote child schooling in a society, an understanding of the causal

factors i.e. identification of variables that have a significant effect on child deprivation or child schooling is required. In order to identify the causal factors, correlation analysis is carried out in the following sections. Though correlation does not mean causation, a relationship may be intuitively inferred.

A. Correlation Analysis

The correlation coefficients given in Table 8 show that the incidence of educational deprivation has negative and statistically significant correlation with urbanisation, literacy levels, irrigation level, proportion of workers participating in services sector and per capital value of agriculture production. And it has a positive correlation with work participation rate (WPR) especially females and proportion of workers in agriculture. It shows the coincidence of higher work participation rate and higher incidence of educational deprivation across the districts in Andhra Pradesh. In fact it is true that the Andhra Pradesh is one among the Indian states having a higher WPR and incidence of deprivation.

Interestingly, infrastructure[50] index is negatively correlated with educational deprivation of children. It can be seen in the light of its impact on economic and social opportunities of the people. *Firstly*, economic infrastructure like irrigation, transportation etc., enhances the people's levels of living by increasing employment opportunities and income levels. Hence the affordability of the schooling also increases. *Secondly*, infrastructure facilities enhance the communications thereby interactions among people. *Thirdly*, it facilitates the spread of markets. *Fourthly*, social infrastructure enhances the access to public services especially educational and health which have positive impact on social opportunities. Among these, second and third implies that the infrastructure facilitates in realising the value of education and fourth indicates the easy access to schooling. In fact the decision to send the

child to school depends upon the perceived value of education. Therefore, better infrastructure facilities are having positive influence on schooling by raising parents' awareness/motivation along with their affordability.

Table 8: Correlation Between the incidence of Child Deprivation in and Other Economic Indicators Across Districts: Andhra Pradesh

Socio-Economic Indicators		r	Sig.	Sign	R^2
1	2	3	4	5	6
1	Urbanisation	-0.66	1%	-	0.44
2	Literacy Levels	-0.89	1%	-	0.79
3	Gross Irrigated Area	-0.59	1%	-	0.35
4	% of Agricultural Workers	0.66	1%	+	0.44
5	% of Service Sector Workers	-0.71	1%	-	0.50
6	Work Participation Rate (WPR)	0.67	1%	+	0.45
7	WPR of Female	0.71	1%	+	0.50
8	Per Capital Value of Agriculture Production	0.73	1%	-	0.53
9	Infrastructure Index	0.62	1%	-	0.38

Note: **1**. For all indicators data is related for the years 1990 or 1991 except Per Capital Value of Agriculture Production - this indicator refers to 1981 an1d it is correlated with same year's deprivation index of rural children; **2**. Gross Irrigated Area is to Gross Cropped Area; **3**. r - Correlation Co-efficient; **4**. Sig - Significance Level.

Source: Census of India 1991, CMIE 2000.

B. Implications

a. Parents' Perceptions on Value of Education: Role of Literacy and Infrastructure

It is observed that household literacy levels have great influence on child schooling (see Buragohain, 1997). It is evident from our analysis

that the incidence of educational deprivation of children is the highest for children belonging to households with all illiterate adults. Also, infrastructure index is negatively and significantly correlated with the incidence levels across districts. The bearings of illiteracy and inadequate infrastructure facilities on educational deprivation can be seen in the following way. As we mentioned above, the decision to send the child to school involves the parents' willingness and affordability. The former arises out of motivation which in turn depends upon the perceived (realised) value of education. The parents' perceptions are influenced by the information on positive value of education[51] and negative value of child work. The capacity of decoding the information at their disposal is better for literate people in comparison to the illiterate ones. The infrastructure facilities[52] (like communication, transportation etc.) are the mechanisms to spread effectively the information about the value of education. These also facilitate the spread of markets. All this enhances peoples' interactions and exchange of views thereby information spread.

b. Primacy of Agrarian Economy: Structure, Relations and Growth

There is evidence to say that the agrarian regimes with respect to structure, relations and growth pattern in an agrarian economy, have an influence on increasing demand for child schooling. Historical experiences (during the pre-independence period) in the context of Andhra and Kerala[53] , have shown that, among other things[54] the improved conditions in agrarian economy had a positive impact on educational development. In coastal Andhra (especially southern districts), the agricultural prosperity was witnessed along with educational development whereas in Telangana it coincided with a backward agrarian economy.

In the post-independent and post-state formation period, too, educational development in the regions of Andhra Pradesh has a coincidence with its agricultural development. Telangana's agrarian

economy, for instance, witnessed significant change in terms of its structure, relations and growth especially since 1970s, and it is a watershed point where the dynamism was infused in the agrarian economy of the region. Better agrarian relations[55] were established via state and people's action[56]. Though the region lags behind in terms of levels (see Venkatanarayana and Jain, 2004), the growth[57] rate of agriculture is at par with or even higher than the developed region (south coastal Andhra) in the state (see Subramanyam, 2002; Vakulabharanam, 2004). One may see the educational development of the region in light of these facts. The declining rate of change in educational deprivation was the highest in the districts of this region especially Karimnagar[58]. However, in the region as well as in the state the district of Mahabubnagar remains the most backward not only on agricultural fronts but also in terms of educational attainments. Similarly, the slow down in educational development of coastal Andhra may be seen in the light of its changing agrarian structure: increasing casualisation of agricultural labour, marginalisation of peasantry and the slow growth in real wages of agricultural labourers.

Therefore, in the light of above analysis, we may put forward a case for improving the agrarian conditions[59] like land reforms, modernisation of agriculture, shifting[60] agricultural labour to non-agricultural occupation especially the service sector and the provision of infrastructure facilities like irrigation as all these factors influence child schooling. In this context, it is worth mentioning that Vietnam managed to produce rice at large scale and could raise its agricultural exports along with significantly reducing child labour and thereby improving child schooling.

c. A Policy of Urban Bias in Development Effort

One of the emerging aspect of our analysis is as following. The problem of educational deprivation of children is a rural phenomenon

closely associated with agrarian economy. In addition, the incidence levels across districts are significantly correlated with infrastructure index. The negative relationship between urbanisation and the incidence level of educational deprivation of children can be seen in the light of urban area's advantage in better infrastructure facilities. It clearly indicates the locational disadvantage of rural children. In this context, one may see the educational deprivation of rural children not in isolation but in the light of generalised deprivation of people living in rural areas. It is observed that there is a close association between the generalised deprivation[61] with respect to the capabilities in rural population and educational deprivation of children in rural area (Jayaraj and Subramanian, 2002). In the welfare state context, it implies that there exists policy bias against people living in rural area in terms of improving infrastructure facilities and rural people's standard of living thereby well-being of rural children. Interestingly, these observations are reflecting the Michael Lipton's theory of 'urban bias' (see Lipton, 1968 and 1977). According to Lipton (1977), rural areas and agriculture which holds large number of population, are consistently neglected[62] in the development effort.

d. Role of Supply Factors: Access to and Quality of Schooling

In addition to the demand factors, the supply of schooling also influences child schooling through two ways. One, through meeting the manifested demand (parents who are aware of the value of education, can afford and interested sending their children to school) for schooling and second, by translating the latent demand (who can afford but not aware of or interested in their children's schooling) into the manifested one. The former case is made possible through easy access (physical, economic and social) to school that may ensure the enrolment of children. But it is the quality of schooling that matters in retaining them in schools as either inadequate access or poor quality of schooling or both together

may have a discouragement effect on the manifested demand. The second case of translating the latent demand into the manifested one needs pro-active initiatives of educational service providers to motivate and persuade[63] parents of school-age children which reminds us that the supply has the characteristics of creating/increasing the demand[64].

IX. Conclusion

In this paper an attempt has been made to examine the problem of out of school children who are in fact referred to as *educationally deprived children*. This broad view includes both child labourers and the no-where children in our analysis. It may be justified in the perspectives of human capital, human development and human rights. The analysis is carried on in the context of Andhra Pradesh, a South Indian state. It presents the magnitude of the problem, its trends and changing composition over the period, and its dispersion across sub-population groups distinguished with socio-economic characteristics and districts/regions. The household characteristics of educationally deprived children are presented and then an attempt is made to link the phenomenon with rural and agrarian economy. We also discussed the availability, access and quality which represents supply side aspects of the schooling. Finally, we've explored the degree of association between the incidence levels and selected set of socio-economic factors having a bearing on child schooling across districts.

It is clear from the analysis that there was a declining trend in the incidence of educational deprivation of children in Andhra Pradesh but it was still at an alarming level in 1991. However there was a dramatic change during the 1990s when the state average remained below the national average. Earlier it was always found to be above the national average. There were disparities associated with the sub-population groups distinguished by their spatial and social group characteristics (in terms

of location, gender and caste). Both at the macro (i.e. state) level and across districts there was relative disadvantage for the children living in rural areas, females by gender and belong to SC/ST social group. But the location effect dominates the gender and caste effects. Alarmingly, the relative disadvantage of children belonging to SC and ST social group especially latter one is increasing. The variation (CV) across districts showed a substantial spatial inequality and the variation is increasing over the period 1961-01. The leaders and laggards in terms of educational development during the pre-independence or pre-state formation retained their relative position in early phases of post-state formation period but changes were evident by the year 1991. A few districts from the backward regions have performed better and they have been catching up with the positions of the districts in developed region and even forging ahead. The progress of schooling in the developed districts has slowed down. Nevertheless, the regional averages showing the historical legacy of educational development/backwardness still continues. It is also observed that the phenomenon of child deprivation has remained closely associated with rural and agrarian economy.

As regards to supply factors, they have potential capacity to increase the demand provided service delivery (ensuring access with quality to all children) is made properly. In Andhra Pradesh it seems the physical access to school is not a serious problem in the state and the state's performance is better than the national average. Within the state there was a little variation across districts in terms of access to schooling especially for primary education and this variation is correlated at negligible level with the variation in incidence levels of educational deprivation of children. Even in case of middle schools[65], the access, say 3km as a walkable distance, is at a satisfactory level[66]. However, still more to do with respect to physical access. Another problem related to schooling is the quality of education[67] provided in the schools

especially the public ones. It includes many aspects unobservable in terms of quantification. The quality of schooling affects not only parents' motivation to send or continue the child schooling but also child to enter or retain in school. Our preliminary understanding indicates that the quality of (public) schooling is not at satisfactory level so that it is acting as discouragement effect on demand for schooling. However, it is beyond the scope of present paper to elaborate the discussion further on this phenomenon.

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Notes

1 In this paper if we use the term child deprivation, we strictly mean educational deprivation of children. These two concepts are used interchangeably.

2 Human capital approach to education highlighted the role of education in economic development (see, Schultz (1961 and 1964); Denision (1978)). Human Rights Declaration in 1948 emphasised the right to education and free and compulsory education in elementary standards. UN Convention on Children Rights (1989) re-emphasised the children's right to education. The intrinsic value and instrumental role of education in the human development perspective is very well brought out in the literature (see, Sen and Dreze, 1995 and 1997).

3 Magnitude indicates the severity of the problem. It depends upon measurement, which, in turn, is shaped by concept and operational definition.

4 These children are also referred to as 'nowhere children' (see, Chaudhri, 1996)

5 In some instances, it is found that they (children) have to work to meet their schooling expenses (see, Grooteart and Patrinos, 1999).

6 We have observed in Andhra Pradesh (NFHS-I, 1992-93) that about 8 per cent of the children in the age group 5-14 are disabled by their activity status i.e. they are neither students nor workers.

7 This is as per NSSO 1993-94 50th Round on Employment and Unemployment. This particular survey added follow-up questions for children of 5-14 age to enquire about their activity status. In rural Andhra Pradesh about 7 per cent of the parents reported so.

8 In fact, the children themselves are not decision-makers of theirs schooling rather it is their parents. Hence, child schooling depends upon the parent's demand for their children's schooling.

9 Both the demand and supply factors are influenced by social, economic and political structure of society or economy.

10 Given the public good nature of the education and its externalities, market may not ensure the supply of schooling. Thus, the provision of schooling is remained with the state's responsibility. Supply of Schooling has two

roles. *Firstly*, meeting the manifested demand (those parents being aware the value of education and willing to send the child) for schooling. *Secondly*, as the supply has the character of inducing the demand, supply of schooling may inculcate (through role modelling, teacher's interactions with parent's etc.,) demand for schooling by motivating parent.

11 To make it simple to understand the ratios are presented in percentage form in the following tables.

12 The aggregate indices do not reveal its distribution and thereby inequality across the population groups. Inequality is the important subject matter of the socio-economic research and policy. There exists significant inequality in case of educational deprivation of children. There are different methods to present the inequality. One among them is the relative disadvantage/advantage index (See Jayaraj and Subramanian, 2002). As a matter of fact inequality implies relative disadvantage or advantage of particular group(s) with respect to the phenomenon in question. This index is a normalised index. Its signs indicate the relative advantage / disadvantage of the spatial or social group in question.

13 The data sources available from the Ministry of Human Resource Development (MHRD) overestimate school going children. It may lead to misleading results while measuring the schooling status of children, especially in 5-14 age group (see Sen, 1977; Tilak, 1996; Chaudhri, 1996). Alternatively, reliable estimates can be made by using data from the Census and National Sample Survey Organisation (NSSO).

14 However the major limitation of data source like Census is that it does not provide data on whether a child is studying in a class appropriate to his age. Thus one cannot bring out the phenomenon of wastage in terms of stagnation or repetition.

15 NSSO Employment and Unemployment Survey provides household characteristics ranging from demographic to economic aspects.

16 In 1961 it was little above one-fourth of the total population and in the sixties and seventies the share went up by one percentage point. But by 1991, it declined to about 25 per cent again The growth of child population in the state is almost similar to the growth of all population.

17 This gender disparity in educational deprivation against the female children can possibly be explained by women's adult family roles.

Traditionally women's role is defined largely in terms of home and family, where women are found to do unpaid work in family and family-farms. Women's participation in wage labour activities and money earning opportunities for women are less than men. Thus, the gender inequality in economic opportunity may explain, to some extent, the gender disparity in education (Dreze and Gazdar, 1997).

18 According to an estimate, it was observed that in 1921, only 14 per cent of children in the school age (i.e. 6-12 years) were in schools in the Nizam's Hyderabad, in Telangana districts excluding Hyderabad it below the state average. In Telangana the socio-economic backwardness and the state's indifference led to educational backwardness in the state.

19 Based on Statement XII.46 (p. 666) in Census of India (1961) Andhra Pradesh, Volume II, General Report, Part I-A (iii).

20 It is in the advent of developed irrigation infrastructure followed by a commercialisation of agriculture (see Rao, 1985 and 1988).

21 It would be interesting to know why in these districts the progress is slowed down despite of their historical legacy with respect to educational development.

22 Interestingly, a high decline in the incidence of deprivation has been observed in rural areas in most of the districts as compared with urban areas. Moreover, those districts whose rural areas performed well in terms of decline in incidence of deprivation also have shown better performance in overall terms (See Venkatanarayana, 20003).

23 Both in 1981 and 1991, the six Southern Coastal Andhra districts and the two Rayalaseema districts of Cuddapah and Chittoor, exhibited low levels of educational deprivation for boys. In three North Coastal Andhra districts, two Rayalaseema districst of Anatapur and Kurnool and almost all the Telagana districts, more than 50 per cent of boys were found to be educationally deprived. As for girls in 1981, in the Mahabubnagar district nearly 82 per cent of girls were out of school. Even in the Deltaic Sourthern Coastal Andhra districts, the deprived girls were found to be between 52 to 60 per cent of the total girl population. It is interesting to note that in Chittoor district, where deprived boys formed only 42 per cent of the total in 1981 as many as 63 per cent of the girls were educationally deprived (see Venkatanarayana, 2003).

24 Among the total children in the 5-14 age group, only 2.5 per cent have reported subsidiary activity status, and among the school-going children as per their principal activity status, only 0.4 per cent are working as per their subsidiary activity.

25 Among those children who are recorded as attending school as per their usual principal activity status, 0..2 million comprising 2.2 per cent reported that they are currently not attending school and the rest 97.7 per cent are currently attending. Among those recorded not attending school by usual activity status, 0.2 million reported as currently attending schools.

26 Whereas by the current attendance status they (educationally deprived children) were 24.3 per cent of total estimated child population.

27 Index is calculated following Jayaraj and Subramanyam (2002).

28 Already there has been a good deal of information asymmetry in the society.

29 The effective literacy takes into account the positive externality of education and it is measured with proximate literacy (See Basu, Foster and Subramaniam, 1999).

30 In rural Andhra Pradesh 76, 59 and 45.5 percent of households belonging to ST, SC and o*thers* social groups have none-literate-adult member.

31 NCAER (2001) provides evidence that the share of households with no literate member, at least a female literate, at least a male literate and both the male and female are literate in 36.9, 4.6, 28.1 and 30.4 per cent respectively. As per NSSO (1993-94), within ST, SC and *others* households, the share of households not having any literate adult female member are 91, 85 and 74 percent respectively (Subramanyam and Reddy, 2002).

32 The backward classes are excluded from the mainstream society and thereby for facilities to basic services like health and education. On the other hand it determines the occupation of the household. NSS 50th round shows that around 80 per cent of the SC as well as ST household's principal livelihood is agricultural activities in rural Andhra Pradesh. In fact, 70 per cent of SC and 40 per cent of the ST households are agricultural labour households and only 10 per cent of SC and 30 per cent ST households are self-employed in agriculture.

33 It is important to note that they are highly concentrated in urban areas, i.e. around 57 percent of the (muslim) community (1991 Census).

34 At present also the concentration of muslim population is very high in Nizam ruled districts, that is in Telangana. The historical legacy of Muslim community in Andhra Pradesh shows that they were concentrated in urban areas and made advances in education since Nizam's rule. Half of the children enrolled in schools (in Nizam's Hyderabad) were Muslims, although Muslims constituted only 15 per cent of the Native state. Many of those who were living in rural areas had administrative positions. It indicates the ruling community's advantages over others.

35 However, it is evident that there is a significant level of child deprivation in each quintile class. There is no threshold level of income above which incidence of child deprivation is next to nothing. It indicates that more than income level, there are other factors, which are playing role in educational deprivation of children.

36 This situation can be seen in two ways. *Firstly*, it arises due to inadequate supply of schooling (Dreze and Gazdar, 1997). In rural areas the availability of schooling facility within the habitation, functioning of school, and the quality of schooling matters. Besides, infrastructure facilities especially transportation available to the habitation also matters. Relatively urban children have better access to, functioning and quality of school compared to that of rural one. Given the income level, variation in supply of schooling influences the levels of child schooling between rural and urban areas. *Secondly*, this wealth paradox may arise due to market (especially labour, land and credit market) imperfections (see Bhalotra and Heady, 2003). In rural areas land is a productive asset in rural areas and the production activity on this is labour-intensive. Due to imperfection in these markets especially in labour markets a farmer may engage his children on his farm. The value of child work is not insignificant in agrarian economy.

37 Our estimates based on NSSO (1999-2000) show that the percentages are 70 and 78 respectively.

38 The increasing share of child population between the period 1993-94 and 1999-2000 reflects the phenomenon of increasing casualisation of labourers in the agriculture sector (see, Parthasarathy, 2002).

39 The regional disparities with respect to educational deprivation of children also reflect the same.

40 It is observed that over the period there is a increasing trend in real wage rate of agricultural labourers (see Subramanyam, 2002)

41 The 'Rate School' is a school financed by the contributions made by village people. On the wishes of local people G. N. Taylor, sub-collector of Godavari district, introduced the 'rate school' system in 1952. As a result of agricultural prosperity and its consequences there was rising educational aspirations of the people. The system went on well till 1960's and later the system failed to continue. The reasons provided were increasing land assessment, water tax and price fluctuation of agricultural commodities (for details on 'rate school', see Mangama, 1973 and for discussion, see Upendranath, 1994).

42 Correspondingly, the discontinuation rates or drop out rates remained high for the landless, declining with sizes of the land holdings (NCERT, 1999 and 2001).

43 For instance, Education Commission 1966 (known as Kothari Commission).

44 Based on NSSO 44th Round (1988-89) A Report on Tribal Living Conditions in Andhra Pradesh.

45 Due to the poor quality of education especially in public schools, the children tend to learn little knowledge and skills which are in consonance with the level of their class standard. In Indian context, it is observed that the low learning achievement of many children attending schools (World Bank, 1997a; PROBE, 1999). It is because inadequacy in quality.

46 If all the primary school age children are enrolled, the ratio will further go up. For stance, in 1993 the estimated children of primary school age (6-11) were 9.1 million. If all these children were to be enrolled it requires 0.2 million teachers. In fact there were only 0.1 million teachers in primary schools. This indicates that the 50 per cent of teachers are required more in primary schools in the State.

47 As a matter of fact increasing number of private school indicates the increasing demand for private schools. In Andhra Pradesh between 1987 and 1993 the share of private schools in total school at the upper primary level increased from 16 per cent to around 33 per cent.

48 The emergence of private education established dual quality of education system: poor public schools and good quality private school. The implication of the phenomenon is far reaching. It leads to differentiation in labour market opportunities earning prospects where the Marxists suspicion would be right that the system education itself perpetuates the class system in the society. Where the instrumental characteristic of education that it facilitates the economic mobility may loose its rigour.

49 The stark example can be given from the village, which I surveyed. As part of my thesis work, I surveyed a Village wholly consists the ST community, in Khammam district of Andhra Pradesh. Actually it is a hamlet comprises 70 households, in a Panchayat consists of 8 such hamlets. The whole Panchayat consists of population belonging to ST community (above 90 per cent of the population) and most of them, above 90 per cent, depend up on agriculture. Though most of the inhabitants of the village belong to the ST community, the commercial crop cultivation and remunerative prices at the initial stage had improved their economic position.

50 Infrastructure Index is constructed based on the following Indicators. a) Road and Railway Route length per 100 Square Kilometres; b) Number of Villages Electrified; c) Gross Irrigated area as a percentage of Gross Cropped Area; d) Bank branches per lakh population; e) Post offices per lakh population; f) Telephone connection per 100 population; g) Number of primary and middle schools per lakh population; and h) Number of hospitals and beds per lakh population. The index is relative index i.e. the relatives position of district (for each indicators individually) with respect to the state average (see, CMIE, 2000: 2). Then we took the sum of the values of all the indicators, unlike CMIE we have given equal weights to all indicators.

51 Dreze and Gazdar (1997) said that ‘the ability of parents to assess the personal and social value of education depends among other things, on the information they have at their disposal’ (p. 86).

52 In addition to information spread, infrastructure facilitates expansion of markets which enhances economic capacity of the people (by expanding irrigation facilities).

53 One of the factors that facilitated educational development in Kerala were related to its agrarian economy, they are land reforms and commercialisation of Agriculture (Tharakan, 1984)

54 The educational policy, provision of schooling facilities, role of missionaries also matters.

55 Unlike Andhra, the agrarian economy was backward given its structure and relations during the Nizams rule. The adverse agrarian relations under the Nizam's rule resulted in the great 'Telangana Peasant Armed Struggle' during 1946-50 (Pavier, 1978; Ram, 1977). As a result of their agrarian programme, millions of acres of land was re-distributed, vetti was abolished, agricultural wages were set at a reasonable level (see Ram, 1977). However, the gains made through the struggle were reverted back when it (the struggle) was totally withdrawn without giving protection to beneficiaries.

56 For instance implementation of land reform from the above (through state legislation) and from the below (peasant struggles under the banner of communist parties especially CPIML known as Naxal moment).

57 The catalyst factors, which were setting the Telangana's agriculture on growth path, might be following one. The presence of Naxalite movement, extension of infrastructure facilities (like irrigation, credit, transportation, communications), demonstration effect of the Coastal farmers [who migrated with capital to Telangana villages for cultivation. One of the reasons given for this is that the rate of return to capital decreasing over the period in Coastal Andhra and it is high in Telangana region (Parthasarathy, 2002:)] on farming techniques and investment in agriculture, diffusion of green revolution technology to the region, commercialisation of agriculture, private investment.

58 Impressive change in terms of decline in the incidence level of educational deprivation during 1981-91 coincided with a surge in percentage of area irrigated and agricultural growth during the period.

59 Also, when agriculture is developed in such a way that it realises its potentials in terms of productivity of land and labour and increases both returns to cultivation and real wages for labour, it would increase income which in turn reduces the opportunity cost of child schooling. It may create conducive environment to send children to school. They will first

improve the economic conditions of the rural poor and thereby reduce the incidence of child deprivation.

60 According Mellor Hypothesis, occupation shift to non-agriculture is influenced by the agricultural development (Mellor, 1969).

61 Jayaraj and Subramanian (2002) on the basis of Sen's capability approach, constructed an index which is possibly reflecting the generalised deprivations of rural people. It indicates number of instances capability failure occurred in the context of rural people. The indicators he used are: Illiteracy, access to housing, drinking water, electricity, transportation and communication, health and educational facilities (see Jayaraj and Subramanian, 2002).

62 Where less than 20 per cent of investment for development went to agriculture which is the livelihood for above 65 per cent of the population and 80 per cent of the poor (see Lipton, 1977: p.).

63 Education Commission 1964-66 observed from the developed countries experiences that one way of increasing enrolment in schools is the motivation and persuasion of parents.

64 In fact it reminds us the famous '***Says*** law of demand' – supply creates its own demand. Originally Say's law implies as the production raises, the employment opportunities will increase which in turn raises purchasing power so that demand will be grown at the aggregate level. In the light of information economics, the law may imply that demand for the supplied product can be raised through providing information about the product, its utility and quality.

65 Which cover children in the age group 5-14 under elementary education.

66 As the above 80 per cent of the population served with a middle school is within a walk-able distance.

67 The field experiences informs us that the quality of education provided in public schools is not satisfying the expectations of the parents of the school going children.

Appendix

Table 1 : The incidence of Educationally Deprived Children by Gender and Location : Andhra Pradesh, Census

Year	Total		Rural		Urban	
	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7
1961	64.1	80.7	69.0	84.9	42.0	60.9
1971	66.1	79.1	71.7	85.3	42.7	54.1
1981	51.3	68.0	57.5	75.8	30.2	41.5
1991	43.8	56.9	48.6	64.3	30.7	36.6

Note: 1. Figures refers to children in the age group 5-14 year;
2. Data Presented in Percentages.

Source: 1. Census of India (1991); 2. Chaudhri, D P (1997)

Table 2: Incidence of Educational Deprivation of Children at the Regional Levels in Andhra Pradesh (1961-91)

Location	Year	Coastal Andhra			Rayala seema	Telangana		
		All (N&S)	North	South		All (N&S)	North	South
1	2	3	4	5	6	7	8	9
Rural	1961	**68.0**	75.8	64.9	**72.7**	**77.2**	80.8	73.7
and	1981	**55.6**	62.7	53.1	**59.2**	**63.1**	67.3	58.9
Urban	1991	**49.4**	52.5	48.3	**50.5**	**52.4**	53.2	51.8
	1961	**71.5**	76.4	68.1	**76.5**	**83.9**	84.2	83.5
Rural	1981	**60.9**	68.8	57.8	**64.0**	**72.5**	73.3	71.7
	1991	**54.2**	59.0	52.5	**54.2**	**61.5**	59.0	64.2

Notes: **1**.Data refers to children in the age group 5-14; **2**. The incidence level is presented in percentage.

Source: Estimated using Census of India, 1961, 1981 and 1991.

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