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Child Deprivation in Madhya Pradesh**

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Child Deprivation

Background

In recent years, there has been an increased interest on the impact of poverty on survival, growth and development of children (Lister 2004). This focus is best reflected in the Millennium Development Goals (United Nations 2000). Two of the eight Millennium Development Goals, universal primary education and reduction in child mortality are directly related to children while the goal of eradicating extreme poverty and hunger has a direct impact on the well-being of children. The millennium development agenda which constitutes the basis for the Millennium Development Goals, promotes policies that improve lives of poor children worldwide. Poverty, at this early stage of life, has enduring consequences on those who survive into adulthood. It condemns them to recurrent poverty spells and a life full of hardship (Grinspun 2004).

Another reason behind increased attention towards the well-being of children is the Convention on the Rights of the Child which lays down the principles of non discrimination in the best interest of the child along with the common standards for the various rights of children. It takes into account the different cultural, social, economic and political realities in which children live.(United Nations 1989). By ratifying the Convention in 1992, India has committed herself to protecting and advancing children's rights, to developing and undertaking all actions and policies in the light of the best interests of children, and has agreed to hold herself accountable for this commitment before the international community. Since then, there has been a number of attempts to main streaming child rights issues in the development discourse of the country. These included Campaign against Child Labour launched in 1992, Campaign against Child Trafficking in India launched in 2001 which is a part of the International Campaign against Child Trafficking, Child Rights Group within the World Social Forum, etc. At the government level also, there has been some renewed thinking. This wisdom is reflected in the draft Integrated Child Protection Scheme of the Government of India. The scheme is based on the cardinal principles of “protection of child rights” and “best interests of the child”. It aims to promote the best interests of the child and prevent violations of child rights through appropriate punitive measure against perpetrators of abuse and crimes against children and to ensure rehabilitation for all children in need of care and

protection. It aims to create a protective environment by improving regulatory frameworks, strengthening structures and professional capacities at national, state and district levels so as to cover all child protection issues and provide child friendly services at all levels (Government of India 2007). The scheme was envisaged to be launched during the XI Five-year Development Plan (2007-2012). However, it is yet to see the light of the day.

In India, rights of children have been enshrined in the fundamental rights and the directive principles of state policy as inscribed in the Constitution of India. These rights have been reaffirmed in the National Policy on Children, announced, for the first time, in 1974 (Government of India, 1974). This policy states that it shall be the policy of the state to provide adequate services to children, both before and after birth and through the period of growth, to ensure their full physical, mental and social development. The state shall progressively increase the scope of such services so that, within a reasonable time, all children in the country enjoy optimum conditions for their survival, balanced growth and cognitive development. In particular, the policy advocates that the following measures shall be adopted towards the attainment of these objectives:

- All children shall be covered by a comprehensive health programme.
- Programmes shall be implemented to provide nutrition services with the object of removing deficiencies in the diet of children.
- Programmes will be undertaken for the general improvement of the health and for the care, nutrition and nutrition education of expectant and nursing mothers.
- The state shall take steps to provide free and compulsory education for all children up to the age of 14 for which a time-bound programme will be drawn up consistent with the availability of resources.
- Special efforts will be made to reduce the prevailing wastage and stagnation in schools, particularly in the case of girls and children of the weaker sections of the society. The programme of informal education for pre-school children from such sections will also be taken up.
- Children who are not able to take full advantage of formal school education should be provided other forms of education suited to their requirements.
- Physical education, games, sports and other types of recreational as well as cultural and scientific activities shall be promoted in schools, community centres and such other institutions.
- To ensure equality of opportunity, special assistance shall be provided to all children belong to the weaker sections of the society, such as children belonging to the Scheduled Castes and Scheduled Tribes and those belonging to the economically weaker sections, both in urban and rural areas.
- Children who are socially handicapped, who have become delinquent or have been forced to take to begging or are otherwise in distress, shall be provided facilities of education, training and rehabilitation and will be helped to become useful citizens.
- Children shall be protected against neglect, cruelty and exploitation.
- No child under 14 years shall be permitted to be engaged in any hazardous occupation or be made to undertake heavy work.

- Facilities shall be provided for special treatment, education, rehabilitation and care of children who are physically handicapped, emotionally disturbed or mentally retarded.
- Children shall be given priority for protection and relief in times of distress or natural calamity.
- Special programmes shall be formulated to spot, encourage and assist gifted children, particularly those belonging to the weaker sections of the society.
- Existing laws should be amended so that in all legal disputes whether between parents or institutions, the interest of children are given paramount consideration.
- In organising services for children, efforts would be directed to strengthen family ties so that full potentialities of growth of children are realised within the normal family, neighbourhood and community environment.

Despite all these provisions and commitments, protecting rights of children in India remains a major development challenge because of a number of social, cultural and economic factors. Although, child protection is increasing been recognised as a human rights concept, yet, children and their conditions are still considered to be as their father's property who is seen as the natural guardian of the child. Traditional structures of patriarchy and other social groupings continue to justify extreme forms of chastisement of children (Kushwah and Prasad 2009). In order to realise the rights of the child and tackle child poverty, robust measures that quantify the nature and extent of deprivation experienced by children are required. These measures should focus specifically on children rather than simply treating children as elements of the household or the family.

The aim of the present paper is to develop a composite child deprivation index to measure child deprivation in Madhya Pradesh and in its constituent districts by social class and residence. In terms of survival, growth and development of children, Madhya Pradesh requires a serious introspection. Latest data released by the Registrar General of India indicates that the state has the highest risk of death during infancy in the country and this situation has prevailed over the last six years. In fact, Madhya Pradesh has always remained amongst the five poorest states of India in terms of the risk of death during infancy or during the first five years of life. The XI Five-year Development Plan (2007-2012) of the state aims at reducing the infant mortality rate in the state to 40 infant deaths per 1000 live births by the year 2012 but the challenge remains how to achieve this goal. Almost 60 per cent children below years of have been estimated to be under nourished which appears to be a major contributing factor in the persistence of high to very high risk of death during infancy and during early childhood in the state. The situation is compounded by the prevailing levels of poverty, illiteracy, especially, among women in the reproductive age group, poor health infrastructure and inadequate safe drinking water and sanitation facilities. Addressing the offending environment that children in Madhya Pradesh face is a major development challenge for the state.

The paper follows the rights framework of addressing the survival, growth and development needs of children. The child rights framework has been evolved in recognition of the fact that a child is a human being which is dependent

upon other human beings till the time she or he grows and develops into a responsible yet productive member of the society. This implies that, as human beings, children have a certain moral status that needs to be recognised in the family and the society. This also means that there are things that should not be done to children for the simple reason that they are human beings and there are certain things that should be done to children to ensure that they become responsible and productive assets to the society. The child rights perspective is an attempt to ensure that children are treated in the family and the society in the morally right way.

The rights that serve the 'best interests' of children can be articulated in many ways but can broadly be grouped into two categories – positive rights and moral rights. Positive rights are those, which are recognised by law. Moral rights, on the other hand, are the ones, which are recognised by some moral theory and accepted by the society as a social norm. The important point is that entailing positive or legal rights to children does not ensure that they also have moral rights. One argument is that possession of a right is sufficient to outweigh or discount all other moral considerations (Nozick, 1974). The counter argument is that possession of rights may not out balance every other moral claim. An important consideration to decide between the two is the capability to exercise rights. This is particularly relevant in case of children as they do not have the necessary capability to exercise the rights bestowed upon them simply because they are dependent upon other members of the family and the society. Obviously, by just possessing a set of rights, children cannot serve their own 'best interests'. There must be conditions in place, which ensure that the child rights are actually exercised in an effective yet socially acceptable manner. These pre-conditions, obviously, are not controlled by children.

United Nations Convention for the Rights of the Child and the National Policy on Children provide the broad policy framework to enhance the capabilities of children. The realisation of child rights perspective requires an operational framework which can be the basis for planning, implementing and evaluating programmes and interventions directed towards improving capabilities of children. Such an operational framework can be derived following the capabilities approach first propounded by Sen (1985) and later discussed in Sen and Nussbaum (1993). The Sen's approach has widely been applied in the welfare economics in shifting the focus from economic development to human development and is now widely accepted as the new paradigm of development.

The Child Deprivation Index

The conceptual model of the child deprivation index deprivation is the idea of distinct domains of deprivation which can be recognised and measured separately. These are experienced by children living in an area (a country, a state, a district or a village, etc.). Children may be counted as deprived on one or more of the domains, depending on the number and types of deprivation that they experience.

The domains of deprivations can be defined in different contexts. In the context of child rights perspective, the domains of child deprivation can be

defined in the framework of child well-being - material well-being, health, education, housing and environment, etc. The domains of child deprivation can also be defined in the framework of Sen's capability approach which has now been universally accepted and applied to characterise social and economic development in a multi-dimensional context. In terms of Sen's capability approach, domains of child deprivation may be defined in terms of child endowments, child capacities and child opportunities. It is possible to establish a congruence between Sen's approach and the child well-being approach as shown in the table 1.

Table 1
The domains of child deprivation

Sen's capability approach	Child well-being approach
Endowment domain	Material well-being domain Housing domain
Capacity domain	Health domain
Opportunity domain	Education domain Environment domain

Each domain of child deprivation reflects a separate aspect of deprivation which avoids the need to make judgments about the complex links between different types of deprivation, and the contribution that each domain should make to the overall index. It is possible, however, that the same child could be captured in more than one domain. This is expected as deprivation is often multi-dimensional in nature. It is therefore desirable and appropriate to capture deprivation occurring in more than one domain.

The child deprivation index, therefore, comprises of selecting domains and measuring deprivation in each domain through appropriate indicator of deprivation and combining them into a composite index. The actual choice of domain is determined by the availability of the data about the indicator which reflects the deprivation in the domain concerned.

In this paper, we have selected the following four variables to development the child deprivation index for Madhya Pradesh and for its constituent districts:

1. Proportion of households having none of the six specified assets (radio/transistor, television, telephone, bicycle, moped/scooter/motorcycle, and jeep/car, etc.)
2. Proportion of live births not surviving up to their fifth birth day.
3. Proportion of children 7-14 years of age illiterate.
4. Proportion of households without latrines.

The four indicators reflect deprivation in terms of four domains of child well-being. The proportion of asset less households reflects deprivation in terms of material well-being. The proportion of live births not surviving up to their fifth birth days reflects deprivation in terms of health well-being. The proportion of

children 7-14 years of age illiterate reflects deprivation in terms of education domain while the proportion of households without latrines reflect the deprivation in terms of environment domain of child well-being.

The four indicators also represent Sen's capability domain. The first and the fourth indicator reflect the deprivation in endowment domain, the second in the capacity domain while the third in the opportunity domain. The indicators so selected have been normalised so that they vary between 0 and 100 with 0 representing no deprivation and 100 representing total deprivation. The normalised variables were then combined into the composite child deprivation index (CDI) according to the following formula

$$CDI = \{(a^3+u^3+e^3+s^3)/4\}^{(1/3)} \quad (1)$$

where

- a = proportion of asset less households as described above,
- u = the risk of death in the first five years of life,
- e = proportion of children 7-14 years of age illiterate, and
- s = proportion of households without latrine.

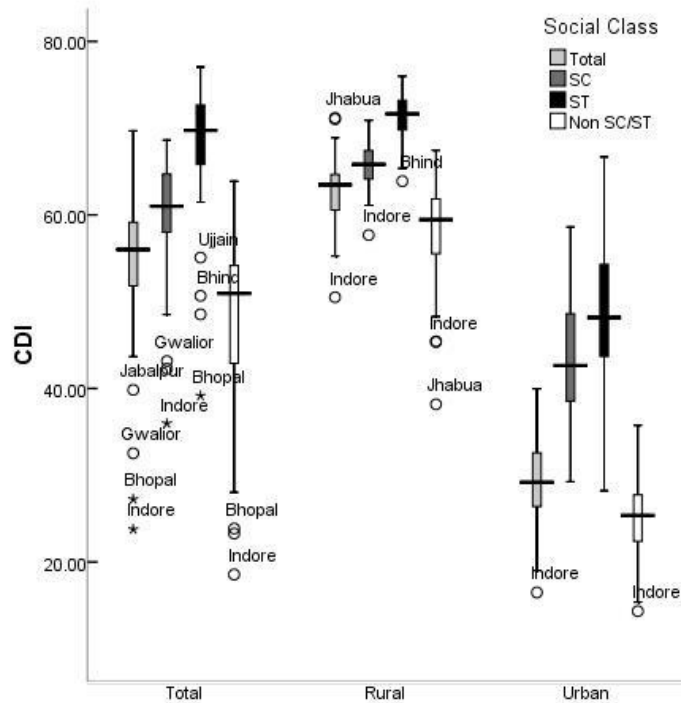
It may be noticed that equation (1) is very similar to the human poverty index developed by the United Nations and used as a measure of human development.

The four indicators described above were estimated for the state as a whole and for its constituent districts on the basis of the information available through the 2001 population census. Estimates of the proportion of asset less households, proportion of children 7-14 years of age illiterate and proportion of households without latrines were derived directly from the information available through the census. The estimates so obtained have then been normalised with a minimum value of 0 and a maximum value of 100. On the other hand, estimates of the risk of death in the first five years of life were derived from the children ever born and children surviving data available through the census using the methodology suggested by Brass (1975). Actual calculations were carried out using the MortPak-Lite software package for mortality estimation developed by the United Nations (United Nations 1988). Finally, the risk of death during the first five years of life so obtained was normalised using the minimum value of 0 and the maximum value of 0.340 which is the highest risk of death in the first five years of life ever recorded in the world.

Child Deprivation in Madhya Pradesh

Estimates of the child deprivation index in Madhya Pradesh around the year 2001 are given in table 2 for the state as a whole as well as for its different population subgroups - Scheduled Castes, Scheduled Tribes and non Scheduled Castes/Tribes separately by residence. For the state as a whole and for all social classes combined, the child deprivation index has been estimated to be around 53 around the year 2001 which means that child deprivation in the state is very close to be termed as high and unacceptable. There also exists a very wide gap in the child deprivation index in Scheduled Tribes (69) as compared to non-Scheduled Castes/Tribes (46) population. Similarly, the index has been found to be very high

Figure I
Inter-district variations in child development index



in rural areas (63) as compared to urban areas (25) which suggests that compared to urban areas, children in the rural areas of the state experience a very high level of deprivation. The very strong social class and rural urban differentials in child deprivation may be judged from the wide gap in the child deprivation index in rural Scheduled Tribes children (71) as compared to the urban non Scheduled Castes/Tribes children (22). It is clear from the table that Scheduled Castes children in the state face extreme form of deprivation in all dimensions of child development. It also appears that Scheduled Tribes children in the state have largely been devoid of whatever child development efforts have been there in the state.

Among the districts of the state, the child deprivation index varies widely. Summary measures of the variation of the child development index across the districts of the state are given in table 3 and presented in figure 1 for the total population as well as for different social groups by residence. For the total population, the child deprivation index varies from a low of around 24 in district Indore to a high of around 70 in district Dindori. In Sheopur, Panna, Damoh,

Sidhi, Jhabua, Barwani and Mandla districts, the child deprivation index has been estimated to range between 60 and 70 indicating that children in these districts face a very high degree of deprivation. By contrast, there are only two districts - Indore and Bhopal - state where the child deprivation index has been estimated to be less than 30. In case of Scheduled Castes, there were 28 districts where the child development index was 60 and above whereas in case of Scheduled Tribes children, the child development index was 60 and more in 41 of the 45 districts of the state. By contrast, in case of non Scheduled Castes/Tribes children, there was only one district where the child deprivation index was more than 60. This shows that extreme form of deprivation in Scheduled Tribes children persists in all districts of the state.

As regards rural- urban differentials in child deprivation, the situation appears to be the worse in the rural areas in all the districts of the state (Table 4). In 34 districts of the state, the child development index in the rural areas has been found to be 60 and more whereas in case of Scheduled Castes living in the rural areas, there is only one district (Indore) where the child deprivation index is estimated to be less than 60. On the other hand, there is no district in the state where the child deprivation index in Scheduled Tribes living in the rural areas is estimated to be less than 60. By contrast, the situation is different in the urban areas of the state. There is no district in the state where the child deprivation index in the urban areas has been found to be 60 and more. Similarly, there is no district in the state where the child deprivation index in Scheduled Castes in the urban areas is estimated to be 60 and more. On the other hand, in case of Scheduled Tribes in the urban areas, there are only four districts - Sheopur, Panna, Satna and Rewa - where the child deprivation index has been found to be 60 or more than 60.

In all districts of the state, the child deprivation index in non-Scheduled Castes/Tribes population has been found to be the lowest among all social classes in all district either in rural or in urban areas. However, the child deprivation index has not been found to be the highest in the Scheduled Tribes population in all districts. In case of combined population, the child deprivation index has been found to be the highest in the Scheduled Castes rather than in Scheduled Tribes population in four districts - Bhind, Shajapur, Rajgarh and Bhopal. Similarly, in the urban areas of the state also, the child deprivation index has been found to be the highest in the Scheduled Castes, not in Scheduled Tribes in six districts - Gwalior, Sagar, Mandsaur, Shajapur, Rajgarh and Bhopal. However, there was no district in the state where, in the rural areas, the child deprivation index in Scheduled Castes is estimated to be higher than that in Scheduled Tribes. These patterns confirm the earlier observation that children of Scheduled Tribes face extreme form of deprivation in the state. At the same time the situation of Scheduled Castes children is also a cause of serious concern. It appears that most of the dividends of social and economic development in general and child development efforts, in particular, have been confined to non-Scheduled Castes/Tribes population living in the urban areas in the state as well as in its constituent districts. while Scheduled Tribes children living in the rural areas of the state continue to face the extreme level of deprivation.

Social Class and Residence Effects of Child Deprivation

Given the fact that child deprivation in Madhya Pradesh is affected by both social class status and residence status, we have used the technique of median polish (Tuckey 1977) to analyse the social class and residence effects on the child deprivation index. Median polish is an exploratory data analysis technique for examining the significance of the various factors in a multi-factor model. It is a robust and resistant method for computing additive decomposition of a two-way table. An additive decomposition of a two way table Z having r rows and c columns is a vector x of row effects, vector y of column effects and a table R of residuals such that

$$Z_{ij} = x_i + y_j + R_{ij} \text{ for all } i \text{ and } j.$$

Median polish more robust than the conventional analysis of variance model. It makes no assumption about the distribution or structure of the data. It is model free exploratory data analysis procedure. It remains effective when the tabulated data are rates or counts or any other kind of value classified in a two way table.

Results of the application of the median polish technique to analyse differentials by social class and differentials by residence in child deprivation are given in table 5. The common value or the grand median of the child development index is estimated to be 52.34 which is very close to the child development index for the total population (52.99). The child deprivation index in the rural areas is higher by 13.50 points from the grand median which reflects the effect of living in the rural areas. Similarly, the child deprivation index in Scheduled Tribes is higher by 5.23 points from the grand median which reflects the effect of belonging to Scheduled Castes on the child deprivation index. On the other hand, the child deprivation index in Scheduled Castes is the same as the grand median but the child development index in non-Scheduled Castes/Tribes is lower by 12.075 points from the grand median.

It is possible to decompose the child deprivation index in terms of grand median, social class effects and residence effects. For example, the child development index of 71.07 in Scheduled Tribes living in the rural areas of the state can be decomposed in the following manner:

71.07	=	52.34	+	13.50	+	5.23	+	0.00
Observ ed value		Grand median		Residence effect		Social class effect		Residual effect

Similarly, the child development index for non Scheduled Castes/Tribes population in the urban areas can be decomposed as

21.810	=	52.340	+	-13.500	+	-12.075	+	-4.955
Observ ed value		Grand median		Residence effect		Social class effect		Residual effect

We have carried out similar exercise for all the 45 districts of the state which suggests that not only the grand median but also residence effects and social class effects of child deprivation vary widely across the districts, although, in general, residence effects are larger than the social class effects in all districts

of the state. Another interesting observation of the table is that interaction of social class effects and residence effects on child deprivation reflected by residuals in table 5 also varies widely across the districts. In some districts, interaction effects are zero or close to zero but in others, they are quite substantial.

Table 5 also permits analysis of how social class and residence impact upon the child deprivation. For example, the child deprivation index in rural Scheduled Tribes which is the highest in the state exceeds the child deprivation index in urban non-Scheduled Castes/Tribes which is the lowest in the state by about 49 points. This gap may be decomposed into a gap in social class effect of around 17 points, a gap in residence effect of around 27 points and a residual effect of around 5 points. Residuals in the polish median exercise are actually interaction effects which are not accounted by the additive model. In other words, extreme deprivation in Scheduled Tribes children living in the rural areas of the state appears to be the result of both social class effect as well as residence effect. The social class effect of child deprivation is a reflection of social exclusion of a particular class - Scheduled Tribes in the present case - whereas the residence effect is a reflection of the difference in the living standards of rural and urban areas. Moreover, the residual effect has also been found to be quite substantial which indicate that social class and residence interact to keep child deprivation in Scheduled Tribes very high in the state.

Results of the above exercise for the districts of the state are presented in table 6. The gap between the lowest and highest child development index varies from a low of 36 in district to a high of 56 in district . In 11 districts, this gap is found to be more than 50 whereas in 8 districts, it is found to be less than 40. There is no district in the state where the gap between the highest and the lowest child development index is less than 35. Obviously, within district social class and residence disparities in child deprivation are quite substantial. The table also suggests that both rural-urban effects and social class effects contribute to the observed gap between maximum and minimum child deprivation index in the districts whereas the contribution of residuals is relatively small except in districts Satna, Rewa and Katni which constitute a geographical continuity.

Conclusions

The purpose of this paper was to develop an index of child deprivation and apply this index to measure child deprivation in Madhya Pradesh where the status of children continues to be amongst the poorest in India. The child deprivation index which is very similar to the human poverty index developed by the United Nations suggests that deprivation among children is quite pervasive in the state and children belonging to Scheduled Castes face extreme deprivation. Child deprivation has also been found to be very high in Scheduled Castes children. Scheduled Castes and Scheduled Tribes in Madhya Pradesh constituted almost 40 per cent of the children in the state at the 2001 population census. Any significant improvement in child deprivation is possible only when children belonging to these most deprived social classes of the population are ensured services and interventions which are critical to their survival, growth and development.

It is clear from the above analysis that both residence and social class have substantial impact on child deprivation in the state. The child deprivation is the least in non Scheduled Castes/Tribes children living in the urban areas whereas it is at its extreme in Scheduled Tribes children living in the rural areas. Residence effects of child deprivation are a reflection of significantly different living conditions in rural and urban areas of the state. A very substantially high child deprivation index in the rural areas of the state and in its constituent districts as compared to the urban areas clearly shows that there is substantial scope for improving living conditions in the rural areas which have an impact on the survival, growth and development of children, especially Scheduled Castes and Scheduled Tribes children. The very substantial rural-urban gap in the child deprivation index also suggests that dividends of most of the development efforts directed towards meeting the survival, growth and development needs of children remain largely confined to the urban areas while rural areas of the state still lack even the basic infrastructure, amenities and facilities.

On the other hand, social class effect on child deprivation reflects social exclusion that appears to be quite pervasive in the state. The simple reason for a very high child deprivation index in Scheduled Tribes is that children of these Castes have not been reached by the services and interventions that serve their 'best interests'. A host of factors are responsible for this deprivation. These include both factors that operate at the level of the family and the society as well as factors that are associated with child related services and interventions. Unfortunately, very little is currently known why services and interventions directed towards survival, growth and development of children - immunisation, safe deliveries, schooling, etc. - are not reaching the Scheduled Castes children and how barriers against the universal reach of these services can be removed.

Meeting the needs of children requires both an agent (intervention) directed towards specific needs of children and a way to get the agent to children and their families (the delivery strategy). It is well known that there are agent or interventions which are capable of reducing very significantly, if not eliminating, child deprivation. The challenge is to get these agents or interventions to those who need them most. Unfortunately, despite the availability of a range of services and interventions that have the potential of meeting the needs of the children, the gap between what can be done and what is actually being done continue to persist so that a very significant proportion of children, especially children belonging to the most deprived sections of the community, continue to remain in the state of deprivation. Since deprivation is essentially multi-dimensional in nature, it appears necessary that an integrated rights-based approach must be evolved for universalising the availability, access and use of services and interventions needed to meet the survival, growth and development needs of children which has a telling impact on child deprivation in the state. At present, planning and programming for children is subsumed under sectoral programmes and activities. Instead of this compartmentalised approach of meeting the basic needs of children, there is a need of a comprehensive approach to guide how children's need can be addressed by different development sectors. This will ensure that issues of children are addressed with special features and components most suited

to them. Unfortunately, the realisation of these variations in the policy discourse is yet to get reflected in the policies and programmes for children. The very high level of child deprivation in the state and some very strong social class and residence disparities in child deprivation class for a comprehensive policy response and a strong mechanism to monitor the implementation of a rights-based approach to meeting the basic needs of children.

It may be stressed here that the rights and needs of children cannot be articulated by children by themselves simply because children are not capable of articulation of their needs. Recognising the needs of the child and meeting these needs is the responsibility of the family, the society and the state. Unfortunately, despite all constitutional and legal provisions, the mind set at the level of the family, the society and the state continues to seeing children as passive recipient of what the family, the society and the state may provide or fail to provide. This mind set needs to be changed and the sooner is the better. This is not only the harsh reality but a major development challenge for a state like Madhya Pradesh.

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Table 2: Child deprivation index in Madhya Pradesh, 2001.

Social class	Residence		
	Combined	Rural	Urban
All social classes	52.99	62.78	25.41
Scheduled Castes	59.39	65.64	39.04
Scheduled Tribes	69.05	71.07	44.07
Non Scheduled Castes/Tribes	46.15	58.72	21.81

Table 3: Summary measures of inter-district variations in child deprivation index in Madhya Pradesh, 2001.

	All social classes	Scheduled Castes	Scheduled Tribes	Non Scheduled Castes/Tribes
Total Population				
Minimum	23.77	35.97	39.16	18.56
First quartile	51.83	58.01	65.83	42.89
Median	56.02	61.00	69.73	50.96
Third quartile	59.15	64.72	72.68	54.17
Maximum	69.70	68.62	77.04	63.88
IQR	7.32	6.71	6.85	11.28
Rural Population				
Minimum	50.52	57.68	63.89	38.18
First quartile	60.56	64.14	69.81	55.54
Median	63.48	65.82	71.66	59.45
Third quartile	64.67	67.41	73.20	61.83
Maximum	71.18	70.91	75.98	67.43
IQR	4.11	3.27	3.38	6.29
Urban Population				
Minimum	16.49	29.27	28.22	14.33
First quartile	26.38	38.55	43.69	22.38
Median	29.20	42.64	48.19	25.37
Third quartile	32.59	48.61	54.30	27.73
Maximum	39.95	58.60	66.69	35.74
IQR	6.21	10.05	10.61	5.35

Table 4
Child deprivation index in districts of Madhya Pradesh, 2001.

District/State	Total				Rural				Urban			
	Total	SC	ST	Non SC/ST	Total	SC	ST	Non SC/ST	Total	SC	ST	Non SC/ST
Madhya Pradesh	52.99	59.39	69.05	46.15	62.78	65.64	71.07	58.72	25.41	39.04	44.07	21.81
Sheopur	63.86	68.62	77.04	58.06	68.51	70.91	75.98	65.28	35.12	51.82	60.28	30.37
Morena	54.81	61.12	64.53	52.78	63.10	64.59	71.66	61.71	25.89	41.01	31.91	22.96
Bhind	51.83	59.36	50.68	49.50	59.65	62.42	63.89	57.73	31.01	48.86	43.69	25.94
Gwalior	32.53	43.16	61.47	28.03	57.91	61.12	71.69	55.54	19.40	29.99	28.22	16.92
Datia	54.55	63.04	68.96	50.96	59.94	64.75	66.98	57.93	27.81	43.63	44.68	24.38
Shivpuri	58.95	63.81	76.51	54.45	64.67	67.50	74.54	62.18	27.76	42.82	57.37	23.68
Guna	59.00	65.98	74.90	54.17	65.10	67.27	74.00	62.23	29.47	44.90	47.40	25.90
Tikamgarh	59.78	63.47	70.95	57.74	64.25	67.05	71.15	62.79	39.45	53.25	57.51	34.98
Chhatarpur	57.52	64.72	70.21	54.16	63.94	67.16	75.33	62.21	33.18	51.39	51.50	28.97
Panna	62.56	67.99	75.06	58.05	64.44	66.83	72.01	61.83	35.23	54.91	66.69	29.73
Sagar	56.02	64.28	73.42	51.01	64.35	67.50	72.86	61.59	28.36	46.18	44.25	23.07
Damoh	60.84	68.04	72.98	56.31	65.97	69.45	72.23	63.22	35.58	51.42	54.30	30.71
Satna	58.71	65.73	72.68	54.15	63.26	64.91	69.99	61.00	32.89	54.93	62.02	27.37
Rewa	59.15	64.95	70.26	55.98	64.55	67.41	70.47	62.89	35.99	58.60	60.91	30.75
Umaria	59.90	58.58	67.65	52.48	61.61	61.16	68.21	56.89	37.74	43.53	58.20	29.28
Shahdol	57.37	58.77	67.05	47.63	66.06	65.40	70.59	61.86	30.64	41.35	51.27	25.45
Sidhi	62.76	65.37	72.39	57.71	67.56	70.28	72.50	64.82	36.88	45.00	56.63	33.28
Neemuch	51.70	57.19	66.88	49.09	58.94	61.68	67.69	57.41	28.35	38.98	51.60	25.54

District/State	Total				Rural				Urban			
	Total	SC	ST	Non SC/ST	Total	SC	ST	Non SC/ST	Total	SC	ST	Non SC/ST
Mandsaur	53.56	62.30	63.10	51.00	60.60	65.31	66.40	58.66	27.96	45.86	43.97	25.37
Ratlam	49.96	58.01	69.98	39.86	62.18	64.08	71.69	54.19	19.02	29.27	34.45	15.37
Ujjain	43.67	57.38	55.09	37.91	63.48	68.91	69.71	60.28	23.38	34.72	41.96	20.80
Shajapur	54.66	63.98	62.54	51.26	62.27	65.82	66.98	59.71	30.60	42.64	42.22	28.29
Dewas	50.52	60.90	70.04	42.89	59.55	65.74	71.25	54.35	24.73	40.53	55.68	20.72
Jhabua	67.10	60.89	73.10	23.28	71.18	67.40	75.69	38.18	26.54	38.55	39.94	21.61
Dhar	54.41	58.01	68.32	35.81	60.72	62.65	70.03	45.35	27.14	40.00	51.24	22.26
Indore	23.77	35.97	48.54	18.56	50.52	57.68	65.38	45.44	16.49	29.47	35.17	14.33
West Nimar	57.63	63.46	69.73	48.96	65.86	69.04	75.64	59.45	29.74	47.40	49.80	25.09
Barwani	63.84	64.48	73.16	42.36	68.89	69.31	73.86	53.31	32.59	53.46	54.08	25.35
East Nimar	55.66	60.79	72.85	46.33	64.55	66.86	73.60	58.62	29.27	46.18	49.61	25.96
Rajgarh	58.20	65.70	65.56	56.00	64.37	67.98	68.12	62.94	32.74	50.20	45.70	29.42
Vidisha	57.70	68.36	74.39	53.43	64.27	69.59	75.94	61.54	27.82	45.39	48.19	23.66
Bhopal	27.23	42.27	39.16	23.85	60.56	66.69	71.70	57.66	22.89	37.38	35.63	19.46
Sehore	51.63	61.00	67.80	46.12	59.94	66.29	73.20	55.26	27.86	39.57	43.29	25.21
Raisen	53.29	62.38	68.37	47.57	59.81	66.18	70.44	55.15	26.38	39.66	45.02	23.11
Betul	55.78	55.45	69.82	45.99	62.28	62.06	69.81	55.74	25.98	34.30	43.76	22.38
Harda	52.39	60.92	73.41	40.43	58.76	65.10	72.84	48.29	25.92	41.52	47.44	21.68
Hoshangabad	47.37	56.23	64.74	41.38	55.26	62.39	66.15	49.76	21.28	33.00	31.24	18.74
Katni	59.59	64.92	71.52	53.94	63.95	65.66	71.49	60.50	29.20	49.92	58.02	22.42
Jabalpur	39.83	48.53	62.30	32.36	61.21	64.14	73.50	56.12	25.07	36.06	46.96	22.09

District/State	Total				Rural				Urban			
	Total	SC	ST	Non SC/ST	Total	SC	ST	Non SC/ST	Total	SC	ST	Non SC/ST
Narsimhapur	51.60	60.77	67.52	46.16	58.08	64.49	71.30	52.78	31.06	48.61	49.45	26.67
Dindori	69.70	68.11	72.65	63.88	71.04	69.26	75.25	67.43	39.95	38.94	56.66	35.74
Mandla	64.39	58.82	71.49	54.51	67.25	64.88	70.80	61.17	27.04	30.01	36.49	25.40
Chhindwara	55.64	54.89	69.31	47.32	65.28	63.81	72.74	59.38	31.30	37.62	46.72	27.17
Seoni	58.36	58.76	67.01	52.35	64.29	67.01	72.10	59.71	30.50	40.08	52.08	27.73
Balaghat	58.27	57.35	65.83	56.14	61.28	61.57	66.05	59.71	32.06	34.35	50.98	27.59

Table 5
Rural-urban and social class effects of child deprivation index

	Common value or grand median	Rural	Urban
Madhya Pradesh			
Common value or grand median	52.340	13.500	-13.500
Scheduled Castes	0.000	-0.200	0.200
Scheduled Tribes	5.230	0.000	0.000
Non Scheduled Castes/Tribes	-12.075	4.955	-4.955
Sheopur			
Common value or grand median	61.37	9.54	-9.54
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	6.77	-1.69	1.69
Non Scheduled Castes/Tribes	-13.54	7.92	-7.92
Morena			
Common value or grand median	51.78	19.37	-19.37
Scheduled Castes	1.01	-7.59	7.59
Scheduled Tribes	0.00	0.50	-0.50
Non Scheduled Castes/Tribes	-9.45	0.00	0.00
Bhind			
Common value or grand median	53.79	10.10	-10.10
Scheduled Castes	1.85	-3.32	3.32
Scheduled Tribes	0.00	0.00	0.00
Non Scheduled Castes/Tribes	-11.95	5.79	-5.79
Gwalior			
Common value or grand median	45.55	19.31	-19.31
Scheduled Castes	0.00	-3.74	3.74
Scheduled Tribes	4.40	2.42	-2.42
Non Scheduled Castes/Tribes	-9.32	0.00	0.00
Datia			
Common value or grand median	54.19	11.15	-11.15
Scheduled Castes	0.00	-0.59	0.59
Scheduled Tribes	1.64	0.00	0.00
Non Scheduled Castes/Tribes	-13.04	5.62	-5.62

	Common value or grand median	Rural	Urban
Shivpuri			
Common value or grand median	55.16	12.34	-12.34
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	10.79	-3.76	3.76
Non Scheduled Castes/Tribes	-12.23	6.91	-6.91
Guna			
Common value or grand median	56.08	13.30	-13.30
Scheduled Castes	0.00	-2.11	2.11
Scheduled Tribes	4.62	0.00	0.00
Non Scheduled Castes/Tribes	-12.02	4.87	-4.87
Tikamgarh			
Common value or grand median	60.15	6.90	-6.90
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	4.18	-0.08	0.08
Non Scheduled Castes/Tribes	-11.26	7.01	-7.01
Chhatarpur			
Common value or grand median	59.28	11.91	-11.91
Scheduled Castes	0.00	-4.03	4.03
Scheduled Tribes	4.14	0.00	0.00
Non Scheduled Castes/Tribes	-13.69	4.71	-4.71
Panna			
Common value or grand median	60.87	5.96	-5.96
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	8.48	-3.30	3.30
Non Scheduled Castes/Tribes	-15.09	10.09	-10.09
Sagar			
Common value or grand median	56.84	14.31	-14.31
Scheduled Castes	0.00	-3.65	3.65
Scheduled Tribes	1.71	0.00	0.00
Non Scheduled Castes/Tribes	-14.51	4.95	-4.95

	Common value or grand median	Rural	Urban
Damoh			
Common value or grand median	60.43	9.02	-9.02
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	2.83	-0.05	0.05
Non Scheduled Castes/Tribes	-13.47	7.24	-7.24
Satna			
Common value or grand median	59.92	4.99	-4.99
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	6.09	-1.01	1.01
Non Scheduled Castes/Tribes	-15.74	11.83	-11.83
Rewa			
Common value or grand median	63.00	4.78	-4.78
Scheduled Castes	0.00	-0.38	0.38
Scheduled Tribes	2.69	0.00	0.00
Non Scheduled Castes/Tribes	-16.18	11.29	-11.29
Umaria			
Common value or grand median	52.34	8.82	-8.82
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	10.86	-3.81	3.81
Non Scheduled Castes/Tribes	-9.26	4.99	-4.99
Shahdol			
Common value or grand median	53.38	12.02	-12.02
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	7.55	-2.36	2.36
Non Scheduled Castes/Tribes	-9.73	6.18	-6.18
Sidhi			
Common value or grand median	57.64	12.64	-12.64
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	6.92	-4.71	4.71
Non Scheduled Castes/Tribes	-8.59	3.13	-3.13

	Common value or grand median	Rural	Urban
Neemuch			
Common value or grand median	50.33	11.35	-11.35
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	9.32	-3.30	3.30
Non Scheduled Castes/Tribes	-8.85	4.59	-4.59
Mandsaur			
Common value or grand median	55.18	11.21	-11.21
Scheduled Castes	0.40	-1.49	1.49
Scheduled Tribes	0.00	0.00	0.00
Non Scheduled Castes/Tribes	-13.17	5.43	-5.43
Ratlam			
Common value or grand median	46.67	18.62	-18.62
Scheduled Castes	0.00	-1.21	1.21
Scheduled Tribes	6.40	0.00	0.00
Non Scheduled Castes/Tribes	-11.89	0.79	-0.79
Ujjain			
Common value or grand median	51.82	17.10	-17.10
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	4.02	-3.22	3.22
Non Scheduled Castes/Tribes	-11.27	2.65	-2.65
Shajapur			
Common value or grand median	54.23	12.38	-12.38
Scheduled Castes	0.00	-0.79	0.79
Scheduled Tribes	0.37	0.00	0.00
Non Scheduled Castes/Tribes	-10.23	3.33	-3.33
Dewas			
Common value or grand median	53.14	12.61	-12.61
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	10.33	-4.82	4.82
Non Scheduled Castes/Tribes	-15.60	4.21	-4.21

	Common value or grand median	Rural	Urban
Jhabua			
Common value or grand median	52.98	14.43	-14.43
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	4.83	3.45	-3.45
Non Scheduled Castes/Tribes	-23.08	-6.14	6.14
Dhar			
Common value or grand median	51.32	11.33	-11.33
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	9.31	-1.93	1.93
Non Scheduled Castes/Tribes	-17.52	0.22	-0.22
Indore			
Common value or grand median	43.58	15.11	-15.11
Scheduled Castes	0.00	-1.00	1.00
Scheduled Tribes	6.70	0.00	0.00
Non Scheduled Castes/Tribes	-13.69	0.45	-0.45
West Nimar			
Common value or grand median	58.22	12.92	-12.92
Scheduled Castes	0.00	-2.09	2.09
Scheduled Tribes	4.50	0.00	0.00
Non Scheduled Castes/Tribes	-15.95	4.26	-4.26
Barwani			
Common value or grand median	61.38	9.89	-9.89
Scheduled Castes	0.00	-1.97	1.97
Scheduled Tribes	2.59	0.00	0.00
Non Scheduled Castes/Tribes	-22.05	4.09	-4.09
East Nimar			
Common value or grand median	56.52	12.00	-12.00
Scheduled Castes	0.00	-1.66	1.66
Scheduled Tribes	5.09	0.00	0.00
Non Scheduled Castes/Tribes	-14.23	4.33	-4.33

	Common value or grand median	Rural	Urban
Rajgarh			
Common value or grand median	56.91	11.21	-11.21
Scheduled Castes	2.18	-2.32	2.32
Scheduled Tribes	0.00	0.00	0.00
Non Scheduled Castes/Tribes	-10.73	5.55	-5.55
Vidisha			
Common value or grand median	57.49	13.87	-13.87
Scheduled Castes	0.00	-1.77	1.77
Scheduled Tribes	4.58	0.00	0.00
Non Scheduled Castes/Tribes	-14.89	5.06	-5.06
Bhopal			
Common value or grand median	52.03	18.04	-18.04
Scheduled Castes	0.00	-3.38	3.38
Scheduled Tribes	1.63	0.00	0.00
Non Scheduled Castes/Tribes	-13.47	1.06	-1.06
Sehore			
Common value or grand median	52.93	14.96	-14.96
Scheduled Castes	0.00	-1.60	1.60
Scheduled Tribes	5.31	0.00	0.00
Non Scheduled Castes/Tribes	-12.69	0.07	-0.07
Raisen			
Common value or grand median	52.92	13.26	-13.26
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	4.81	-0.55	0.55
Non Scheduled Castes/Tribes	-13.79	2.76	-2.76
Betul			
Common value or grand median	48.18	13.88	-13.88
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	8.61	-0.86	0.86
Non Scheduled Castes/Tribes	-9.12	2.80	-2.80

	Common value or grand median	Rural	Urban
Harda			
Common value or grand median	53.31	12.70	-12.70
Scheduled Castes	0.00	-0.91	0.91
Scheduled Tribes	6.83	0.00	0.00
Non Scheduled Castes/Tribes	-18.32	0.60	-0.60
Hoshangabad			
Common value or grand median	47.70	15.51	-15.51
Scheduled Castes	0.00	-0.81	0.81
Scheduled Tribes	1.00	1.95	-1.95
Non Scheduled Castes/Tribes	-13.44	0.00	0.00
Katni			
Common value or grand median	57.79	7.87	-7.87
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	6.96	-1.13	1.13
Non Scheduled Castes/Tribes	-16.33	11.17	-11.17
Jabalpur			
Common value or grand median	50.10	14.04	-14.04
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	10.13	-0.77	0.77
Non Scheduled Castes/Tribes	-10.99	2.97	-2.97
Narsimhapur			
Common value or grand median	56.55	10.93	-10.93
Scheduled Castes	0.00	-2.98	2.98
Scheduled Tribes	3.82	0.00	0.00
Non Scheduled Castes/Tribes	-16.83	2.13	-2.13
Dindori			
Common value or grand median	54.10	15.16	-15.16
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	11.86	-5.86	5.86
Non Scheduled Castes/Tribes	-2.52	0.69	-0.69

	Common value or grand median	Rural	Urban
Mandla			
Common value or grand median	47.44	17.43	-17.43
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	6.20	-0.28	0.28
Non Scheduled Castes/Tribes	-4.16	0.45	-0.45
Chhindwara			
Common value or grand median	50.72	13.09	-13.09
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	9.01	-0.09	0.09
Non Scheduled Castes/Tribes	-7.44	3.01	-3.01
Seoni			
Common value or grand median	53.55	13.47	-13.47
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	8.54	-3.46	3.46
Non Scheduled Castes/Tribes	-9.83	2.52	-2.52
Balaghat			
Common value or grand median	47.96	13.61	-13.61
Scheduled Castes	0.00	0.00	0.00
Scheduled Tribes	10.55	-6.07	6.07
Non Scheduled Castes/Tribes	-4.31	2.45	-2.45

Table 6
Decomposition of state/district disparity in the child development index in
residence effect and social class effect.

State/District	Difference between maximum and minimum child development index within the state/district	Difference attributable to residence effect	Difference attributable to social class effect	Residual
Madhya Pradesh	49.25	27.00	17.30	4.95
Sheopur	45.62	19.09	20.31	6.22
Morena	48.70	38.75	9.45	0.50
Bhind	37.95	20.20	11.95	5.79
Gwalior	54.77	38.62	13.73	2.42
Datia	42.61	22.31	14.67	5.62
Shivpuri	50.86	24.69	23.02	3.15
Guna	48.11	26.60	16.64	4.87
Tikamgarh	36.17	13.80	15.44	6.93
Chhatarpur	46.36	23.82	17.83	4.71
Panna	42.28	11.92	23.57	6.79
Sagar	49.79	28.61	16.23	4.95
Damoh	41.53	18.04	16.30	7.19
Satna	42.62	9.98	21.82	10.82
Rewa	39.72	9.56	18.87	11.29
Umari	38.92	17.63	20.11	1.18
Shahdol	45.15	24.05	17.28	3.82
Sidhi	39.22	25.28	15.51	-1.58
Neemuch	42.15	22.70	18.17	1.28
Mandsaur	41.02	22.43	13.17	5.43
Ratlam	56.32	37.24	18.29	0.79
Ujjain	48.91	34.20	15.29	-0.58
Shajapur	38.69	24.76	10.60	3.33
Dewas	50.53	25.21	25.93	-0.61
Jhabua	54.08	28.85	27.92	-2.69
Dhar	47.77	22.65	26.83	-1.71
Indore	51.05	30.21	20.38	0.45
West Nimar	50.54	25.83	20.44	4.26
Barwani	48.51	19.78	24.64	4.09
East Nimar	47.65	23.99	19.32	4.33
Rajgarh	38.71	22.43	10.73	5.55
Vidisha	52.27	27.75	19.46	5.06

State/District	Difference between maximum and minimum child development index within the state/district	Difference attributable to residence affect	Difference attributable to social class effect	Residual
Bhopal	52.23	36.07	15.10	1.06
Sehore	47.99	29.91	18.01	0.07
Raisen	47.33	26.52	18.60	2.20
Betul	47.44	27.76	17.73	1.94
Harda	51.15	25.40	25.15	0.60
Hoshangabad	47.40	31.02	14.44	1.95
Katni	49.07	15.74	23.30	10.04
Jabalpur	51.40	28.08	21.12	2.20
Narsimhapur	44.63	21.85	20.65	2.13
Dindori	39.52	30.32	14.37	-5.17
Mandla	45.39	34.87	10.36	0.17
Chhindwara	45.57	26.19	16.46	2.92
Seoni	44.37	26.93	18.37	-0.94
Balaghat	38.46	27.22	14.87	-3.62