

Notes on the Differing ‘States’ of Child Undernutrition in Rural India

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Abstract There are now striking differences between major states of India in terms of their performance in reducing undernutrition among children. This article explores the underlying political and institutional factors that may account for these differences, and shows the strong correspondence between measures of the capacity, responsiveness and accountability of different state governments and their performance in improving the nutrition of children.

1 Introduction

In spite of the indications that some progress has been made in India in recent years in the reduction of poverty (see Himanshu 2007), as other articles in this issue of the *IDS Bulletin* also note, little if any progress has been made with regard to malnutrition among children. It is striking that between the second round of the National Family Health Survey (NFHS) conducted in 1998–9 and the third, of 2005–06, the percentage of children classified as underweight (considered to be the more comprehensive anthropometric measurement of malnutrition: Deaton and Drèze 2009) declined only marginally at the all-India level from 46.7 per cent to 45.9 per cent. There are, however, striking differences in the incidence of child undernutrition in rural areas across the major Indian states – although the available evidence suggests that there was little variation between them in the early 1970s, when the proportion of children who were underweight was as high as 70 per cent in rural areas in most states. Some states have done very much better than others over the past quarter century or so, in reducing this most serious constraint on the expansion of human capabilities in India (Table 1). Between 1974 and 2001 Kerala succeeded in reducing the level of child undernutrition by 57 per cent, Andhra Pradesh by 45 per cent and Tamil Nadu by 43 per cent, whereas Orissa managed a reduction of only 25 per cent and Madhya Pradesh less than 10 per cent.

Due to inadequacies in the available data, no-one has yet been able to construct a long enough time series at the state-level to enable serious econometric analysis with immediate, proximate and underlying determinants of nutrition status to explore the reasons for variations across states. The purpose of this article is to suggest explanations for these inter-state differences that may be investigated further and tested once more data become available. Our particular concern is to examine underlying political and institutional variables that strongly influence the proximate and immediate drivers of nutrition status. Walton, in his contribution to this issue of the *IDS Bulletin*, distinguishes between ‘immediate drivers’ of nutrition status (nutrient intake and health status), ‘influences on local behaviour’ (household economic resources, local public goods and local health system) and ‘contextual influences’ (including distributional wealth dynamics, public policy choice and implementation). We are concerned with the factors that underlie the differences in these contextual influences across major states. Data limitations mean that we are able to deal only with the states of Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu and West Bengal. Although this set of the major states quite clearly fails to represent North India, it does at least include one of the ‘BIMARU’ states in Madhya Pradesh, and another chronically poor state in Orissa. It also includes a fair

Table 1 Percentage of children who are underweight (WHO dataset)

States	1974–9	1988–90	1991–2	1995–7	1998–9 (2000–1) [*]	Reduction 1974–2001 (%)
Andhra Pradesh	73	65	57	56	41 (40)	45
Gujarat	73	69	66	62	49 (55)	25
Karnataka	72	70	65	54	46 (48)	33
Kerala	68	43	40	26	28 (29)	57
Madhya Pradesh	70	65	n/a	n/a	58 (64)	9
Maharashtra	76	64	71	58	n/a (55)	28
Orissa	72	71	64	57	56 (54)	25
Tamil Nadu	68	61	57	40	38 (39)	43
West Bengal	n/a	n/a	64	n/a	45 (50)	22 [†]

Source WHO (2008).

*The figures in brackets are from the National Nutrition Monitoring Board for 2000–1.

†The figure for reduction for West Bengal is from 1991–2.

representation of the differences in political regimes across Indian states – differences that help to explain policy differences and variation in the quality of programme implementation.

2 The politics of malnutrition

The hypothesis that we wish to explore is that differences between states in terms of the reduction of malnutrition among children, are underlain by differences between their political regimes. As Harriss showed in earlier work (2003), we may first differentiate between Indian states in terms of the political representation of different castes/classes (this formulation reflecting the view that while caste and class are certainly not equivalents, there is considerable overlap between the categories), and second, the nature of political competition in them. The analysis suggests, therefore, that there are important differences between states in terms of the extent to which their political systems allow for voice on the part of poorer, lower caste/class people. There are also differences of degree between states when they are assessed along a scale between ‘clientelist politics’ on the one hand and ‘programmatic politics’ on the other. Of course, there is no Indian state in which clientelist politics of accommodation play no part at all in political mobilisation, but the analysis suggests that there are differences of degree between states. The states in the present analysis were categorised as follows:

1 States in which upper caste/class dominance has persisted and the Congress Party has remained strong in the context of a stable two-party system (‘traditional dominance’ rather than politics of accommodation *vis-à-vis* lower classes):

- Madhya Pradesh
- Orissa

2 States with middle caste/class-dominant regimes, where Congress has been effectively challenged but has not collapsed and there is fairly stable and mainly two-party competition (the politics of accommodation *vis-à-vis* lower classes have continued to work more or less effectively):

- Andhra Pradesh
- Gujarat
- Karnataka
- Maharashtra

3 States in which lower castes/classes are more strongly represented and where the Congress lost its dominance at an early stage (clientelism may persist but the leading political parties have well-defined programmes):

- Kerala
- Tamil Nadu
- West Bengal

In the original analysis of these differences and their implications, it was hypothesised that those states in which lower castes/classes are more strongly represented and where Congress dominance was replaced at an early stage by more or less strongly programmatic political parties,² would be found to have been the most effective in regard to poverty alleviation. The middle caste/class dominated party regimes, continuing to pursue clientelist politics of accommodation, it was argued, would be less pro-poor, and the states with still upper caste dominance even less so. The records of the states considered in this article, with regard to the reduction of undernutrition among children, quite strikingly bear out this analysis. What we will argue, therefore, is that while Michael Walton's overall analysis of the politics of malnutrition in India – that the central problem around public action to tackle malnutrition is that such action is poorly aligned with political and administrative incentives – appears to have explanatory mileage, the differences between states show what can be achieved by programmatic parties with the characteristics that Kohli identified in his comparative research on West Bengal, Karnataka and Uttar Pradesh in the 1980s (Kohli 1987, and see Harriss 2003: 205). The party regimes most likely to accomplish pro-poor distribution, he argued, are likely to have the following characteristics: (1) coherent leadership; (2) ideological and organisational commitment to exclude propertied interests from direct participation in the process of governance; (3) a pragmatic attitude toward facilitating a non-threatening as well as a predictable political atmosphere for the propertied entrepreneurial classes, and (4) an organisational arrangement that is simultaneously centralised and decentralised, so that the regime is 'in touch' with local society but not subjected to local power holders. In varying degrees the CPI(M) in Kerala and West Bengal, the Dravidian parties in Tamil Nadu and possibly the Telugu Desam party in Andhra Pradesh display these characteristics.

3 Trends in undernutrition and their determinants

We note, first, broad consistency between the trends in undernutrition across states shown in Table 1 and a variety of factors that are among the more important proximate determinants of nutrition status, having to do with childcare

(influenced by female literacy), local public goods (water supply and sanitation), and the local health system (immunisation and institutional deliveries). We also note correspondence with an index of institutional performance across Indian states derived by Mayer (2001) from a factor analysis model, and a measure of the elasticity of rural poverty (as defined by the conventional income measure) with respect to growth (using data for the period 1958–97) calculated by Besley *et al.* (2005).

We find a close correspondence (Table 2) between levels of undernutrition and vaccination coverage in the rural areas across states, with Orissa as an outlier (52 per cent of children in Orissa of 12–32 months having received the recommended vaccination, more than in Andhra Pradesh, Karnataka and Maharashtra). If we take the NFHS data on the incidence of institutional deliveries as another single snapshot indicator of the quality of health services then, again, there is a clear correspondence with states' varying performances in reducing child undernutrition (with West Bengal, here, an apparent outlier). There is a similarly close correspondence between variations in female literacy and in trends in the reduction of undernutrition (though Maharashtra and Orissa have done relatively better in regard to female literacy than in the reduction of undernutrition); and there is a broad correspondence between indicators of the quality of local public goods – availability of safe drinking water and of sanitation – and the trends in reduction of undernutrition, though Kerala is a puzzling negative outlier in regard to drinking water, and Tamil Nadu with regard to sanitation.

The overarching factor among the proximate determinants of nutrition status is that of income (an indicator of 'household economic resources'), which is likely strongly to influence food security and dietary intake, access to health care and the quality of the health environment, and to have an influence upon the quality of childcare. As our indicator here we consider the elasticity of rural poverty with respect to growth (from Besley *et al.* 2005). The virtue of this measure is that it suggests that there exist significant institutional differences between states that account for whether or not growth is inclusive and broad-based. It is one measure of

Table 2 Trends in undernutrition and some proximate and underlying determinants

State	Underweight reduction 1974–2001 (%) (NFHS)	Underweight 2005–6 (NFHS)	Children 12–23 months who have received recommended vaccines 2005–6 (%) (NFHS)	Children of 12–23 months with Inst'nal deliveries (%) (NFHS)	Rural households with access to safe drinking water 2001 (%) (Indiastat 2008a)	Rural households with access to toilet 2001 (%) (Indiastat 2008b)	Female literacy (%) 1999–2000 (Sengupta 1991)	Rural poverty elasticity of growth 1958–97	Mayer Index' (2001)
Kerala	57	26	69	99	17	81	86	-1.19	1
Tamil Nadu	43	32	84	87	85	14	53	-0.62	2
West Bengal	(22) [†]	42	63	34	87	27	52	-1.29	6
Average	50 [‡]	33	72	73	63	41	64	-1.03	
AP	45	35	43	61	77	18	43	-0.77	7
Karnataka	33	48	40	42	81	17	44	-0.41	5
Gujarat	25]	41	52	57	77	22	47	-0.67	4
Maharashtra	28	42	50	51	68	18	55	-0.38	3
Average	33	42	46	53	76	19	47	-0.56	
Madhya Pradesh	9	63	32	20	62	9	35	-0.37	9
Orissa	25	46	52	35	63	8	42	-0.71	8
Average	17	54	45	28	63	9	39	-0.54	

*Mayer's index is of institutional performance and was constructed with a factor analysis model taking account of six indicators: hospital beds/1,000; PDS share 1987–8; teachers/school 1991; % villages electrified; % girls 6–<11 in school; IAS transfers after >1 year

†Figures for West Bengal from 1991–2 only ‡Average excludes West Bengal

government capacity. In the context of an overall correspondence between this measure of the elasticity of poverty with respect to growth and performance in regard to reduction of undernutrition Tamil Nadu stands out as having done relatively well in regard to nutrition, in comparison with its performance in poverty reduction, while both Gujarat and Orissa have evidently done less well in improving child nutrition than they have done in reducing poverty. It appears likely from the data of Table 2 that these variations may be explained as being the outcome of differences in the provision of public services, and in the quality of bureaucratic performance. Tamil Nadu does well in regard to hospital births, and stands second only to Kerala in regard to 'institutional performance' – which can be taken as a measure of the 'responsiveness' of government to citizens' needs. Orissa, on the other hand, has done poorly in these respects; while Gujarat, in spite of its greater wealth than the other states under consideration here (save for Maharashtra, which is another 'high income' state), has done quite poorly in terms of the provision of public services affecting the nutrition of children.

A final set of factors that should be considered concerns interventions that have a direct impact upon the nutrition of children. The most important of these in India is the distribution of foodgrains through the public distribution system (PDS). Although regarded by some analysts as ineffective (as Walton argues in his article in this *IDS Bulletin*), it is certainly a moot point as to whether it has not made an important contribution to reducing malnutrition in those states in which it has been most fully implemented. The PDS has clearly been ineffective in states such as Bihar and Uttar Pradesh, where there is a long history of only very limited distribution of food grains under the Scheme; but it is reasonable to wonder whether it has not been effective in the Southern states. Of course correlation (in this case between PDS performance and trends in the reduction of malnutrition) does not constitute causality. But the correlation at least suggests the possibility of a causal link. Although we lack a consistent data series on the distribution of food under the PDS to demonstrate the point conclusively, available published data relating to the 1980s and 1990s (before the introduction of the targeted PDS in 1997) show that the states that have done well in

reducing undernutrition among children are also states that have made the most extensive use of the PDS. An analysis by Tyagi (1990) for the single year 1988–9, comparing 'desired distribution' (taking account of poverty, agricultural production and income levels) and 'actual distribution' through the PDS showed that in Kerala, followed by West Bengal, Tamil Nadu and Andhra Pradesh, actual distribution was higher than 'desired', and that in Karnataka the two were at parity. In Gujarat, Maharashtra, Orissa and Madhya Pradesh actual distribution was below 'desired' (see Table 7 in Harriss 2003: 224). Data presented by Swaminathan in her study of the PDS show that Andhra, Tamil Nadu, Kerala, West Bengal and then Karnataka followed them accounted for about half of the all India offtake of foodgrains under the PDS in the 1990s (Swaminathan 2000, Tables 4.1 and 4.2), and have generally had the highest *per capita* offtake among the major states from the early 1970s (Swaminathan 2000, Tables 4.3 and 4.4). These data do show, however, that both Maharashtra's and West Bengal's offtakes have tended to decline over time, while Orissa's has latterly increased (after the introduction of the targeted PDS). Following the introduction of targeting large numbers of those unquestionably in need are being excluded from the PDS – especially so in Kerala, followed by Orissa and Maharashtra. Now Tamil Nadu alone maintains a universal system of public distribution (Swaminathan 2008).

4 Conclusion

We offer only presumptive evidence in this article, but although only descriptive, the data do show strong connections between the varying character of the political regime across states and government performance in regard to services that influence the nutrition status of children, and these with the trends of reduction of undernutrition. There are of course many intervening variables, but the patterns we have traced are striking in their consistency, and the three dimensions they represent – capacity (reflected in the elasticity of poverty with respect to growth), responsiveness (shown up in the index of institutional performance) and accountability to poorer, lower caste/class people (which is what the typology of political regimes is based upon) – are the hallmarks of good governance.

In view of all that is known about the quality of public action in Kerala from the work of Dreze and Sen (1989) the relative success of the state in reducing malnutrition among children is unsurprising. The Tamil Nadu story is less well known, although the quality of provision of public services in the state, and the performance of its bureaucracy, have long been recognised, and latterly it has been marked by a strong commitment to social welfare (reflected, for instance, in the maintenance of the universal PDS). West Bengal is a more problematic case among the states that we have distinguished as having the most accountable regimes. The state has done well with regard to poverty reduction but that this success has not been more emphatically translated into the reduction of undernutrition amongst children may be explained by the (puzzlingly) poor quality of public provision (see also Biswas and Verma in this issue). Andhra Pradesh, on the other hand, stands out among the middle caste dominated regimes, having – according to our data – been second only to Kerala and on a par with Tamil Nadu in regard to improvement of nutrition, and following only Punjab among the major states, after Kerala and West Bengal, as regards the poverty elasticity of growth. According to recent data the incidence of rural poverty in the state is by now exceptionally low (8.5 per cent according to Himanshu’s calculations: 2007, Table 5). In Harriss’s earlier analysis, too, it was found that Andhra Pradesh had performed comparably with the states with lower caste/class regimes, and suggested both that middle caste/class dominance has been challenged most strongly in Andhra, amongst the states in group 2, and that the state has a more institutionalised party system. Finally it was argued that though the policies they have pursued can be described as ‘populist’, ‘The political regimes of Andhra Pradesh and Tamil Nadu have certainly

generated more poverty reduction [and, as we see here, more progress in reducing malnutrition] than clientelist patterns of politics in Maharashtra and Karnataka ...’ (Harriss 2003: 228). Tamil Nadu’s political regime has long been known for effective mobilisation from below, and electoral competition between relatively well-organised parties has led both the ADMK and the DMK, the two major regional political parties in the state, to adopt programmatic policies targeted at the public at large, such as the Nutritious Noon Meal Scheme first introduced under the ADMK (Rajivan 2006). On the other hand, in Maharashtra, for instance, there is an absence of any such a programmatic policy on nutrition moved by a political party. The issue of malnutrition has only been of concern to the parties when the judiciary has brought it up following individual writ petitions filed in the High Court. In Madhya Pradesh, too, it was reported from a village with a high incidence of child malnutrition that clientelistic party-voter linkages inhibit the politicisation of the issue, because of the fear that the problem might be raised against the ruling political party, which has majority support (BBC 2008).

Finally, the analysis shows that a strong performance in regard to income poverty reduction is not necessarily conducive to the reduction of malnutrition, if the relevant public services are weak (this is the case in Orissa, and, possibly, in West Bengal); while it also shows that both Gujarat and Maharashtra have done rather poorly in translating their relatively high state *per capita* incomes into the expansion of capabilities. The analysis also confirms the importance of the public distribution system, and lends support to Madhura Swaminathan’s criticisms (2008) of the introduction of targeting.

Notes

1 We note that there are two major sources of data on undernutrition in India: the results of the work of the National Nutrition Monitoring Board (NNMB) of the National Institute of Nutrition, which extend back to the 1970s, and those of the National Family Health Survey, referred to earlier, and of which the first round was conducted in 1992–3. There is also the global database of the World Health Organization which, for India, contains data re-analysed mainly from that generated by the NNMB, with some reference to the NFHS. There are gaps for some states for some years in the NNMB, and in the WHO series that we use in this analysis – which is supplemented

by reference directly to the NNMB for 2000–01. We have chosen to rely principally on the WHO series in view both of the limited time depth of the NFHS and of the fact that it is quite consistent with the NNMB series.

2 These parties are the Communist Party of India-Marxist (CPI-M) in West Bengal and Kerala – where it has, however, regularly alternated in office with Congress-led formations – and the Dravidian parties in Tamil Nadu that have pursued policies that can fairly be described as ‘populist’. All these party regimes have characteristics that Kohli suggested would be most conducive to pro-poor redistribution (1987: 8–11).

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