

How can electoral success be sustained by a 'lagging development' regime? Population, Economy and Society in West Bengal Since the 1970s

Arup Maharatna*

*Professor, Gokhale Institute of Politics and Economics, Pune 411004

Email: arupmaha@yahoo.com

Abstract

West Bengal, a major state of eastern India, is conspicuous not only for being ruled by an elected Leftist coalition – so-called Left Front – uninterruptedly for about last three decades (often described as sound 'political stability'), but also for its widely acknowledged successes in fertility transition, execution of redistributive land reform and political decentralisation programmes. Ironically, however, the state, in almost all comparative assessments of social, human, infrastructural developments – typically stands to occupy a clearly lagged position vis-à-vis many other states, especially in the south and even against all-India records on many key indicators. This paper seeks a clue to this by comprehensively evaluating West Bengal's relative performance in demographic and socio-economic transformation. A well-disciplined grassroots political mobilisation network and machinery of the Left Front parties has been highly instrumental for comparatively fast declines of fertility and population growth rates and for lasting political stability in an otherwise 'laggard' infrastructural, social and human development regime. However, a government geared overwhelmingly to ensuring mass electoral support via grassroots mobilisation network and priority, with a relative neglect of social and economic infrastructure and human development, is likely from longer-term perspective to be stifled by major backlashes, of which one form could be adverse patterns of inter-state migration.

Acknowledgement: This is revised version of a paper presented at the Annual Conference of the Indian Econometric Society held at Jadavpur University, Kolkata, during 20-22, January 2005. A shorter version was delivered as my talk at a workshop on 'West Bengal: Challenges and Choices' held at the Centre for Studies in Social Sciences Calcutta, Kolkata in August 2004. I thank the participants, who took part and interest in the discussions following my presentation at these two meetings. I gratefully acknowledge helpful comments on discrete parts of earlier drafts from S. Mulay, R. Nagarajan, Nahid Kamal, A.E. Ruud, Manabi Majumdar, Chintamoni Jog. My thanks are also due to Dwaipayana Bhattacharyya and Prabir Basu for their help in gathering district level information. I am grateful to Sohel Firdos for his help with maps, to Rasika Chikte, Vandana Shivnekar, Ketki Savant, Chintamoni Jog, Priti Bhat for unfailing research assistance.

1 Introduction

Good or bad, the states of India of late are frequently, in seeming consonance with current wave of competitive philosophy, put to comparative scrutiny by various agencies including individual analysts, print media (e.g. magazines), government agencies, and even high-profiled international organisations like World Bank. The relative position of West Bengal (WB hereafter), one major state of eastern India, is clubbed – in most assessments of socio-economic and infrastructural development – neither with well-performing nor worst-

performing states.¹ But conspicuously enough, a coalition of Leftist parties (popularly known as Left Front) has been returning to power with undiminished electoral success since 1977. In some influential appraisals, WB is cited as exemplary of successful redistributive land and tenancy reforms and of political decentralisation and participation. The land reform experience under the Left Front rule has often been described – especially in some prominent international forums - as a success story of ‘the West Bengal model’, with many lessons for other parts of Third World (Raychaudhuri 2004:1; Hanstad and Brown 2001). While this has possibly fed into some complacency (and a self-congratulatory mood) of the long-ruling Left Front, this at the same time leaves a lingering confusion about this state’s real overall performance in relativist and consequentialist terms. Indeed WB’s oft-glorified success in land reforms, decentralisation and political participation presumably has been instrumental in blurring some of what Amartya Sen calls its ‘conspicuous failures’.² This of course generates curiosity as to how sustained mass electoral support for Left Front continues amidst persistently mediocre (and even below average) performance in wide variety of socio-economic and human development indicators [to be elaborated in details]. In our effort to explore clues, this paper attempts fairly comprehensive assessment of WB’s demographic and socio-economic changes in comparison, not with most ‘prosperous’ states, but with much of south India, which being on a similar (or even worse) socio-economic footing at the time of Independence, have performed relatively well subsequently. We include for comparison Kerala, Tamil Nadu (TN), and Andhra Pradesh (AP).³ As this comparative assessment will show a disciplined grassroots organisation and network of ruling political parties by itself could be highly instrumental to such achievements as electoral success, political participation/stability and even an impressive pace of fertility transition, but this cannot – over longer run - make up for fairly deep adverse implications of a *relative* neglect/failure of effective and commensurate initiatives and practical programmes for social, human and developmental infrastructure build-up.

Demographic Transition

¹ The ranking of states typically posits much of south India as having fared better than Hindi-speaking central and northern belt, which includes Bihar, Madhya Pradesh (MP), Rajasthan, Uttar Pradesh (UP). The latter are often referred to as BIMARU, a popular acronym meaning ‘sick’ in Hindi. While much of northern and western India (e.g. Punjab, Haryana, Gujarat, Maharashtra) is portrayed as a fast industrialising belt, WB’s middle-ranking position (and mediocre performance) easily escapes analysts’ remark (e.g. Mehta and Shah (nd): 34-35; Acharya et al 2004:221).

² Sen 1997:3. WB’s rank, in some recent opinion-surveys of quality of human habitation, is found worse than even some of the BIMARU states (e.g. MP, Rajasthan) (e.g. Saran 2004). On the contrary, a somewhat casual clubbing of WB together with Kerala, the Indian ‘star’ in human development, is probably not difficult to come across in the contemporary.

³ Although we exclude Karnataka for the sake of lesser complexity, the broad comparative picture should not be altered greatly by its inclusion. While AP’s demographic experience does not appear at par with that of Kerala and TN, it seems to have some (at least apparent) similarities with that of WB (more on this later).

We begin by reviewing trends in WB's broad demographic scene in the post-independence period in a comparative light. Table 1 presents time series on major demographic indicators and their proportionate changes. While WB appears to have been an above-average performer in achieving avowed goal of population growth reduction, the south Indian states have fared even much better than WB. The above-average performance of WB in slowing down of population growth rate is well corroborated by its above-average reduction in birth rate. This is reaffirmed by its relatively fast fertility reduction in comparison with all-India average. Similarly, the magnitudes of mortality reduction over last two decades have been somewhat larger relative to all-India figures. West Bengal's distinction as an above-average performer holds broadly true also in terms of reduction of infant mortality as well as improvement of life expectancy during this period.⁴ However two disquieting demographic features of WB deserve particular mention. First, unlike most of the south Indian states, the sex-ratio (which is widely used as a broad index of gender biases) in WB is suggestive of longstanding anti-female biases. However WB's overall sex-ratio has moved over last few decades in the direction of being more balanced than before. Second, the population density, historically high, has increased enormously over last several decades to become the highest. This certainly has to do with trends and patterns of migration – both internal and with neighbouring countries. On the whole, however, so far as overall demographic transition (fertility transition in particular) is concerned, WB's achievement has been substantial and closely behind much of the south. Indeed, as we shall see shortly, WB's pace of fertility transition has surpassed what could be warranted in light of its *relative* stagnation in socio-economic and infrastructural spheres.

In existing literature on explanations of fertility transition, two broad but distinct perspectives (not mutually exclusive) stand out: the first assigns key role to socioeconomic changes (including mortality improvements) and concomitant escalation of economic security and aspirations conducive to lowering of demand for children. The other highlights significance of ideational change towards small family norm and its diffusion (via various mechanisms) and of innovation of contraceptive methods. The ideational change, which often originates in a small section of population, could well be influenced by changes in household economics, macroeconomic scenario and policy, demographic and sociological circumstances. But its wider diffusion across entire society is generally facilitated by expansion of education, communications, social interactions, demonstration effects, media exposure, and effective and broad-based family planning programme (e.g. Cleland and Wilson 1987; Bongaarts and Watkins 1996; Cleland 2001; and Caldwell 2001).

⁴ The pace of improvement in infant and child mortality in WB has been rather modest and indeed laggard compared to Kerala's achievements. There have been even some *rises* in IMR among ST and SC communities of WB during 1980s. [We would return to this later].

India, with its sharp regional diversities, provides almost a test-ground for these major perspectives and their variants.⁵ First, Kerala's fertility decline to below replacement level by 1980s is widely known to have followed the 'human development' path, wherein fairly fast fertility reduction - even in a low-income setting - resulted largely from rapid expansion of education, health care and human development. However Kerala's experience is sometimes seen as 'poverty-led' fertility transition (Basu 1986), arising from poor peoples' inability to sustain large family vis-à-vis their growing aspirations (e.g. investing on children's quality). By contrast, Punjab-story is portrayed as one of economic development, rising incomes and security of life and livelihood (see e.g. Das Gupta 1999, 1995). On the other hand TN's achievement of near-replacement level of fertility by early 1990s entails combination of diverse elements (e.g. Nagarajan 1997). While TN's 'exclusionary' development pattern is sometimes thought to have led to a 'poverty-driven' fertility decline (Kishor 1994), this state has been also branded as a shining example of effective and well-managed family welfare and health care programmes (Anthony 1992; Srinivasan 1995; Dreze and Sen 2002:212-218). The mass exposure to media (e.g. cinema in particular), coupled with weakening of joint family system and patriarchal control due to social-reform movements initiated since early twentieth century in the state, have also been instrumental (e.g. Bhat 1998; Kulkarni et al. 2002).

More lately, a remarkable fertility reduction in AP - by nearly twice the speed at all-India level since mid-1980s - has occurred without *significant* improvements in social and human development indicators (e.g. female literacy, mortality). But there has been almost dramatic reduction of poverty through direct pro-poor programmes (e.g. cheap rice reaching 80 percent of population) and other poverty-alleviation measures (e.g. ensuring favourable changes in wage rate and labour market). Although this should have contributed greatly to AP's rapid fertility decline, the exact mechanism of their linkage is not very readily clear (James 2005). For example, the media exposure appears to have been an important determinant of contraceptive prevalence in coastal belt with low literacy, while it was found unimportant in Telengana-Rayalaseema region, a seat of strong labour movements (James 1999). This points to the importance of *diffusion* mechanism, but cumulative contribution of rises in economic security (e.g. increases in wage incomes and employment) cannot be downplayed. Enhanced media exposure, multiplication and widening reach of self-help groups, effective labour movements bent on generating female work opportunities seem to have escalated social interactions, which in turn have facilitated social diffusion of ideational/motivational change toward fertility control (Dev et al. 2002). Indeed WB's experience of fertility transition seems to have (at least apparent) similarities with that of AP (e.g. timing, limited human development, pro-poor posture of the government, importance of diffusion). However, the *percolation/diffusion* of a small-family- norm in WB, as we demonstrate, has occurred, unlike

⁵ See e.g. Das Gupta 1999, 2001; Bhat 1998; Srinivasan 1995 among others.

in AP and elsewhere, largely as a by-product of organised grassroots mobilisation network and machinery of the ruling political parties.

Socio-Economic Transformation

Table 3 presents information on time trends of several key socio-economic indicators for WB and three south Indian states. Since most of the information is gathered from standard and official (and large-scale survey) sources, we refrain from discussing in details the quality, reliability and possible defects of data used, as they are amply available in the literature. As can be seen, despite rises in per capita agricultural and total state domestic product in WB during 1980s and 1990s, they have hardly been larger than those of southern regions and all-India average. In fact per capita agricultural output of WB has always remained lower than all-India figures. This has been the case despite a remarkable dynamism that agriculture in WB has shown over this period – a fact, which is most likely linked to huge increases of population density in the state. The population pressure in relation to land has been relatively acute in WB for a long time, and this relative disadvantage has worsened steadily over post-Independence period (see Table 1).

Unsurprisingly, unemployment rate in WB has always been higher than that of south India (except Kerala) and India as well, and it has shown a rising trend too. [Indeed unemployment rate in WB is nearly twice all-India figure.] Similarly, consumption expenditure per head of rural population of WB has almost always been lower than in south Indian states and whole India. And, all this appears broadly consistent with relatively sluggish improvement in nutritional levels, especially among children, in WB compared with much of the south.⁶

WB's performance relative to much of the south in terms of poverty reduction (especially in rural areas) is of interest. India's poverty estimates are generally fraught with controversies and debates relating to methodology and data sources. In fact there are two parallel series of poverty estimates based on National Sample Survey Organisation (NSSO) consumption expenditure data - official and non-official for India and all major states. We present in Table 3 multiple time series of head-count ratio (HCR for short, which is the proportion of population below 'poverty line') for rural sector, derived by using 'official' (i.e. Planning Commission's Expert Group) methodology as well as its modifications made by individual researchers. The methodological choice is practically a non-issue while assessing *trend* of poverty, since any particular method applied for various years should produce

⁶ According to national accounts statistics, WB's rank in per capita net domestic product at constant (1980-81) prices slipped from the second highest in the early 1960s to the sixth (below all-India figure) by early 1990s (Shaban 2002). The NCAER data for 1994 posits WB's rank in per capita rural income as being bottom 15th among 16 major states (Shariff 1999:Table 3.1:25)

temporally consistent series.⁷ But recent years have witnessed fairly fierce controversies surrounding a *change in the NSS criterion for collection of consumption data after 1993-94* (Deaton and Drèze 2002 for a summary of the issues involved).

In early 1970s West Bengal has had one of the highest rural poverty (e.g. more than 70 per cent being below 'poverty line') (see Table 2).⁸ Thereafter, during the 1980s and 1990s, WB, like most other states and all-India, had experienced reduction of poverty. In comparison with worse-performing neighbouring states, WB's poverty reduction naturally seems substantial and/or perhaps even commendable. Compared to Bihar and Orissa, WB is often seen to have experienced '*rapid declines in rural poverty, and substantial improvements in the distribution of consumption*' (Sengupta and Gazdar 1997:196; italics added). But this relative (advantageous) position of WB vanishes in relation to good-performing states, especially much of the south.

A tendency – in some quarters - to overstate (or even somewhat glorify) WB's achievement in poverty reduction could be linked to a perceived opportunity of publicising widely merits of redistributive land reforms and democratic decentralisations, in which the state has made commendable progress (e.g. Hanstad and Brown).⁹ But more penetrative and objective evaluation of WB's achievements in poverty alleviation – particularly in comparison with other good-performing states - has remained overdue so far. First, despite WB's lower than all-India average pace of poverty reduction, the former is often more credited because of its extremely high initial level of poverty around the early 1970s (e.g. Raychaudhuri 2004:10). But, because of high initial level of poverty itself, WB has had greater *scope* and *need* for larger poverty reduction. As Deaton and Drèze (2002:3735) rightly point out, 'looking at absolute changes in (say) HCRs would seem to give an unfair 'advantage' to states that start off with high levels of poverty, and where there tends to be a large number of households close to the poverty line'. For example, even a large (absolute) reduction in HCR (e.g. by 14.3 point in WB during 1983-88) from high initial level, may not suffice to get poverty level down to that of a state in which *HCR decline* has been much smaller (e.g. 4 point in AP) (Table 2).¹⁰ Indeed the gains in poverty alleviation during late 1970s and much of 1980s in WB could only redress such effects of its initial high levels of poverty, and thereby helped it only to catch up with national average level. Thus, despite substantial poverty reduction during 1980s and 1990s in rural WB, its achievement judged in terms of *existing* incidence of poverty appears at best

⁷ Despite criticisms and modifications of 'official methodology', it has its value, let alone for comparative insights. Given plausible pitfalls and remedies of the methods, some advocate 'official methodology' as giving 'best possible estimates' (e.g. Malhotra 1997).

⁸ This could at least be partly related to a large influx of refugees and forced migration from the erstwhile East Pakistan since Partition. Indeed WB witnessed a much higher population growth in 1951-61 (34.5 per cent) than all-India average (21.6 per cent).

⁹ WB's progress in land reform has occurred in three areas: redistribution of agricultural land ownership, regulation of sharecropping relationship (more popularly *operation barga*) and distribution of homestead plots. The main components of *operation barga* include tenure security protection for sharecroppers (*bargadars*) and control over the share afforded to *bargadars*.

¹⁰ To give a counter example: Kerala, which experienced the least quantum fall in death rate in the

modest from standpoint of all-India level and many other states, especially in south. While *changes* from relatively adverse levels of such indicators as poverty and per capita calorie consumption may appear substantial (e.g. Drèze and Sen 2002:95), their remaining high levels of incidence have remained rather inadequately noticed.

For example, levels of poverty existing among less privileged social groups, say tribal and lower caste, are, according to some estimates, massive. As per official (non-official) estimates based on NSS 50th round data, more than 40 (54) per cent were found poor in rural WB in 1993-94. As against WB's official estimate of HCR being nearly a third of rural population in 1999-2000, some estimates suggest even rises of rural poverty to around 56 percent (Table 3). According to NCAER survey in 1994, as many as 72 per cent of tribal and 56 per cent of SC peoples, and about half of general population of rural WB have been found to be in absolute poverty. Taking an average of multiple HCR estimates for WB in *late 1990s* (on an assumption that each is either overestimate or underestimate), the mean figure turns out to be 36-37 per cent. This happens to coincide with what Angus Deaton estimated after best possible adjustments for better comparability of 55th Round data (Deaton 2001). Even the lowest estimate of HCR (provided by Deaton and Drèze 2002) of 22 per cent in rural WB for 1999-2000 cannot but be considered large.¹¹ Indeed a substantial chunk of population (counted as non-poor), whose incomes are just above, but still very close, to the 'poverty line', must be living a life which should not be much different from that of a technically counted as 'poor'. A relatively large number of such quasi-poor households can make for WB's effective incidence of rural poverty really quite massive, which tallies well with sluggish improvement in quality of life and human development (to be shown shortly).¹²

WB's relatively fast growth in calorie intake between 1972-3 and 1993-94 has sometimes been cited as a reaffirmation of its *relative* success (in comparison with BIMARU states) in rural poverty alleviation (Drèze and Sen 2002:95; Swaminathan and Ramachandran 1999). It is, however, not doubtless as to whether this has derived chiefly from redistributive improvements or a fast agricultural growth during 1980s and 1990s.¹³ More importantly, the fact that the improvements started off with very low levels of food consumption and nutrition per capita leaves its lingering mark. For instance, long-term improvements in calorie consumption per head since 1970s could enable the state merely to catch up with the national

1980s and 1990s (Table 1), is not seen as worst-performer in mortality improvement.

¹¹ Micro-level studies often report larger magnitude of material deprivation and poverty in rural WB than is usually captured by large-scale survey at the state level. As one recent review concludes, 'the extent of deprivation in living standards in rural West Bengal are much more pronounced than can be comprehended through state level estimates' (Chatterjee 1998:3013).

¹² Deaton and Drèze (2002:3736), finding an asymmetry between movements of HCR and per capita consumption expenditure (as per NSS data), have rightly hinted that 'many poor households are close to the poverty line'. Thus, while very modest increase in consumption among those whose income is just little below 'poverty line' can hardly bring them a *perceptibly* better quality of life, this could easily get them excluded from the category of 'poor'. Indeed the number of such households bordering around poverty line should be very large in WB because of its high initial poverty.

¹³ On these issues see e.g. Harriss (1993), Saha and Swaminathan (1994), Rogaly, Harriss-White, and Bose (1999) among others.

average by early 1990s. Indeed allegedly fast increases in nutritional intakes in WB do not seem to manifest themselves in terms of nutritional *outcomes* (see Table 2). For example, both on average consumption expenditure per capita and on nutritional indicators for adults and children, WB's position stands amongst the lowest and is distinctly behind the national average.

While WB has much larger *proportion* of landless households than the national average, increases in *real* agricultural wages fall much short of those of many other states (e.g. Kerala, Tamil Nadu) and of whole India.¹⁴ In fact average earning *per day per worker* in WB (Rs 21) has been lower than all-India average of Rs 23, and is indeed far less than in such states as Kerala (Rs 41), Punjab (Rs 35), Haryana (Rs 42), Himachal Pradesh (Rs 28) (Shariff 1999: Table 3.6). A fairly large longitudinal village-level survey across rural WB spanning 1978-1998 shows that the scale of most poverty-alleviation programmes has been quite small: 'IRDP loans amounted to about Rs 30 per household per year, and employment programs to about Rs 300 per household per year. .. On this scale they were unlikely to make a significant dent in the local land distribution or other assets of the poor' (Bardhan and Mookherjee 2003:19). Furthermore, while estimated elasticity of poverty with respect to non-farm output over 1960-1994 turns up very high in WB, the latter's actual poverty-reducing effects have remained tragically circumscribed by its relatively sluggish expansion as well as some adverse initial conditions (e.g. higher illiteracy, infant mortality and landlessness, lower farm productivity and rural living standard) (Ravallion and Datta 2002).

Thus neither pace of poverty reduction nor overall growth of incomes *per capita* in WB compares favourably with much of south India (and even all-India average). Although its performance may appear 'remarkable' in comparison with the bad-performing neighbouring states (e.g. Bihar, Orissa), the *remaining* scales of poverty and related indicators of ill-being by the 1990s have remained glaringly large. As we would see, all this has clear corroboration in limited improvement in such matters as safe child delivery, awareness about AIDS, rural electrification, provision of medical services per capita, distribution of food under public distribution system, and various infrastructural provisions. As will be shown shortly, WB's progress in fertility transition has outstripped what seems warranted in terms of social and physical infrastructural provisions and human development.¹⁵

Physical and Social Infrastructure and Human Development

Table 3 provides information on levels and progress of social and physical infrastructure and human development in WB as compared to southern regions and whole of

¹⁴ See also Drèze and Sen (2002:Table A.3, Part 11); Gazdar and Sengupta (1999); and Parthasarathy (1996).

¹⁵ A part of poverty decline in WB itself might well have been caused by fertility decline; see Birdsall and Sinding 2001 for evidence on this linkage in developing countries.

India. First, WB's progress of literacy and basic education (especially among females), though it has been considerable from its extremely low initial levels, appears far from adequate in comparison with most of the southern states (except AP). But record of literacy and education is often found to divert considerably from the magnitude of *acquired* educational skill and performance. The *effective* educational achievement - which should ultimately count as an agent for accelerating fertility decline (and of course mortality decline too) - is almost certainly less than what the educational statistics per se suggest.

For example, the gap between WB and India/AP in terms of female literacy somewhat disappears when comparison is based on proportion of females (6 years +), who have completed primary education. This raises some scepticism about the quality of literacy statistics of WB. For example, a recent survey among select schools in rural WB reports that only seven per cent of children in class *three and four*, who were not privately tutored, could write their names (Kumar 2003). Therefore proper care is required for evaluating level and expansion of *effective* (female) education. On this count WB's record - not in comparison with BIMARU states and AP - appears vastly deficient relative to much of south India.¹⁶

Likewise, in terms of other social and physical infrastructure expansion such as spreading power, road, transport, communications, health facilities, public distribution network in villages, WB's performance fares clearly badly relative to most of south Indian economy. For instance, per capita consumption of foodgrains delivered by public distribution system of only about 3 kg per year in West Bengal appears horrifyingly low compared to south Indian states including AP (and indeed much less than all-India level). On this direct state instrument for protecting poor workers' economic security, WB's failure has been quite glaring, contributing to a slower pace of poverty reduction than what was achieved in AP and Kerala. As for illustration: the NSS 55th round survey on household food intake and its perceived sufficiency in 1999-2000 shows highest percentage of households not having enough food everyday in WB, followed by Orissa (Govt of India 2001). Furthermore, among the states considered in Table 3, the share of poorest 20 percent population in public health subsidies is the least in WB, with the highest share accruing to richest 20 per cent. Thus WB's pro-poor redistributive stance in land reforms, interestingly, fails to find a 'laudable' echo in public health provisions either.

Telephone connections reached more than eighty per cent of villages of Kerala as back as 1991, a time when only 17 per cent of WB villages could have this. Likewise, only 25 per cent of villages in WB could be connected by *pacca* road by 1991, while Kerala had already built almost cent per cent rural-urban road-linking network by that time, followed by TN and AP. So is the picture for other basic amenities including medical, public transport, electricity, postal services. Indeed WB's sluggish performance in infrastructural development seems to match with its sluggish reduction in rural poverty (as discussed above), as the

¹⁶ After reviewing WB's performance in elementary education, Dreze and Sen (2002:96) conclude that

former is often found to be fairly strongly complimentary to the latter (e.g. Mitra et al. 2004, Ali and Pernia 2003, Yao, 2003). Although there are a few provisions where WB has fared relatively well, namely coverage of safe drinking water and natal and antenatal care and vaccinations, they get easily overshadowed by stagnation in most other fronts.

Therefore, it is not only in the educational front that south India (except perhaps AP) has had a distinct lead over WB, but it has clearly emerged much better-performer in terms of poverty eradication, provision and distribution of basic human amenities, and social and physical infrastructural development. The relative performance is summarised and put into sharper focus in Table 4, which presents time trends of composite indices (and respective ranks) in infrastructural, human and social development spheres across states. It is clear that WB's rank in composite indices of economic infrastructure, capability poverty, educational development has not only been markedly behind a large chunk of the south, but it hovers around the bottom zone of performance scale. No less notably, its rank in social and economic infrastructure has slipped back over 1981-1991 – signifying a distinct relative retrogression in social and economic infrastructure development. West Bengal's relative infrastructure development index (with all-India being 100) has slipped down from 110.6 to 92 between 1981 and 1991, while these indices for Kerala and TN have hovered around 150 during this period (see CMIE 1997:7). On the other hand, its rank in human development has seen no upward movement from its pretty mediocre position since 1981. Furthermore, WB's indices in educational development and capability poverty have been among the worst across major Indian states. Ironically indeed, as Clark and Walcott (2003: no page number), while illustrating wide regional divergence in economic performance after Independence, cites particularly West Bengal's remarkable downfall from being its second richest position (next to Maharashtra) (in terms of per capita income) in 1961 to 9th rank by 1998. But, strikingly, WB's rank in fertility transition has been among few top-performing states far outstripping its (relative) performance in economic, social, human, infrastructural and infant mortality improvement (Table 4).

It becomes clear that WB's fertility transition has proceeded fairly fast at a time (i.e. during early 1980s to early 1990s) when not only improvements in material and human developments were at best moderate (or even less), but remaining levels of human deprivations were still very substantial. This clearly points to the significance of diffusion mechanisms that can work somewhat independently of economic, social, infrastructural and human development. Before we examine the nature and strength of such mechanism in adequate details, we provide – by using a differential fertility analysis – a further illustration of WB's fertility transition having outstripped its progress in economic, infrastructural, social and human development.

[t]he Left Front government has a long way to go in addressing this problem'.

Fertility has declined amidst poverty in West Bengal: a further illustration

In this section we examine WB's fertility transition in terms of a differential fertility approach involving scheduled tribes (ST), scheduled castes (SC) and other (non-ST/SC) groups.¹⁷ Table 5 presents background information on ST, SC and others in early 1990s. ST group appears clearly most vulnerable in *economic* terms. Take, for example, their relative position in respect of land ownership. Not only landlessness is greatest among tribal households, the proportionate share of *irrigated* land under tribal ownership is also the least. While the proportion of households owning *irrigated* landholding of less than 2 acres is only 19 per cent among tribal people, the corresponding figure for the SC group is about 2.5 times larger. This clearly reflects tribals' economic disadvantage relative to SC and others. Thus proportionately meagre tribal villages have had a fair price shop, primary health centre and a market/hat within 2 KM even in the early 1990s (see Table 5).

The tribal people are least literate, and they are clearly behind SC counterparts. Similar is the pattern of differential access to basic amenities between these social groups. While about 40 per cent of tribal households have no access to minimum civic amenities (namely electricity, safe-drinking water and toilet), the proportion of such deprived SC and other households is vastly less (16 and 9 per cent respectively). More than two third of tribal households use surface pond/lake for bathing and washing purposes, and their time required for fetching water is the highest (eleven minutes). The proportion of tribals using wood as prime fuel for cooking is nearly twice the figure for SC people. While on these counts non-tribal population also - especially SC group - suffer considerable deprivation, they are still *relatively* better off vis-à-vis tribal counterparts, who clearly stand at the bottom of the scale of well-being based on such criteria as average number of rooms, and consumer durable/assets (e.g. radio, clock, bicycle). The large-scale household surveys in 1993-94 by National Council of Applied Economic Research (NCAER) and National Sample Survey Organisation (NSSO) show that an overwhelming tribal proportion (nearly 73 per cent) are in absolute poverty, which is much higher than that for SC (about 57 percent) in rural WB (Table 5). This is also reflected in higher infant/child mortality levels among tribal people during the 1980s and 1990s.¹⁸ Also notable is more balanced female-male ratio among tribes, pointing to lesser gender biases and discrimination.

Two chief sources on fertility are used (Table 6). First, fertility survey among sample women (10 and 20 per cent respectively in 1971 and 1981) as part of census provides

¹⁷ Just after Independence, the Constitution of India prepared two Schedules, one for tribes and the other for low castes – known respectively as 'Scheduled Tribes' (ST) and 'Scheduled Castes' (SC). These lists are used for dispensing special benefits for these less privileged groups. After several upward revisions since the 1951 census, the scheduled members have reached as many as 573 and 1,091 respectively. For discussions of various issues relating to identification and enumeration of tribes, see Maharatna 2005:chapter 1.

¹⁸ Tribal IMR has traditionally – but until recently - been lower than that of the SC community. This

information on number of births over last 12 months by five-year age group, and average number of children ever born by age in 1981 census (not in 1971).¹⁹ The other major source is two recent National Family Health Surveys (NFHS-1 in 1992-93 and NFHS-2 in 1998-99). A few other sources (e.g. large-scale surveys by NSSO and NCAER) are also utilised. The registration data, though useful on its own right, are available neither for early 1980s in WB, nor for social groups on a regular basis.²⁰

Although NFHS data involve small sample size for minority groups like ST, with the possibility of its larger standard errors, this should not be a big hurdle in judging differential (temporal) *change* (especially under reasonable assumption that the differential, if any, in response and other biases between these groups remain unaltered over time). Two measures of fertility are considered here. One is period fertility rate based on the number of births in last 12 (in case of census) or in 36 months (in case of NFHS) by age-group of women; and other is cohort (completed) fertility expressed as mean number of ever born children to ever married women aged 40-49 years. Because of considerable initial fertility differential between these groups, we measure fertility change in *proportionate terms* (rather than changes in the number of births per woman).

As can be seen, tribal fertility has been consistently lower (indeed lowest until early 1990s) compared to non-tribal counterparts, especially SC well up to late 1990s, though the gap has narrowed over time and probably vanished very recently. This record of lower tribal fertility, though perhaps not readily obvious, is not unexpected in the light of historical and contemporary evidence of fertility differentials (e.g. Maharatna 2005: especially chapters 3 and 4).

Second, current (period) fertility seems to have declined among all three groups by somewhat uniform pace during the 1970s and 1980s (Table 6). Somewhat larger fertility decline in 1971-81 than in the following decade is related to coercive sterilisation programme enforced during the Emergency of 1970s. The scope for larger (absolute) declines in fertility in the initial years of transition should have been larger too.

In contrast to declines in *period* fertility, the mean number of children ever born to women at the end of their reproductive span (i.e. a measure of completed cohort fertility) seems to have *increased* - albeit marginally - between 1981 and 1990-92 for both SC and ST groups (see Table 6). This probably reflects an increase of cohort fertility of women, who had begun reproductive career in the 1950s, as compared to those who entered reproductive span about a

tribal advantage got reversed by the 1990s as revealed by NFHS data (see Maharatna 2005, Table 4.3).

¹⁹ The five-year age groups made in the 1971 census however are slightly different from conventional categories (presumably for minimising biases arising from age misreporting). They are: <13, 13-17, 18-22, 23-27, 28-32, 33-37, 38-42, 43-47, 48 above. Furthermore, the fertility information was collected only from currently married women.

²⁰ There are a few special surveys undertaken by the Registrar General office, which provide estimates of various demographic parameters separately for social groups (SC, ST and non-SC/ST) at the state level. One such was done in 1984.

decade earlier (i.e. in the 1940s). This implied increase in cohort fertility in the 1950s and 1960s is probably the 'pre-transition rise' associated generally with early modernisation process.²¹ This seems to testify an earlier start of modernisation among the SC people than among the tribals.

It is noteworthy that fertility of the cohort of women, who were in reproductive ages since early 1970s, seems *lower* than that of those who were about a decade older. While this certainly confirms ongoing pervasive fertility transition, the proportionate change has been the least among ST category. However, extremely meagre change in tribal completed fertility (for women aged 40-49 years) in the 1990s probably reflects feeble modernising and other influences, as they indeed stand last (behind SC people) in reaping benefits of development and modernisation processes.

With all this said, there can be little doubt that there has been a distinct decline in *current fertility rate* across all three groups over the recent past. Note too a similar magnitude of fertility decline (in *proportionate* terms) between ST and SC groups, especially up to the early 1990s.²² [The fertility declines in terms of (absolute) number of births per woman for these social groups testify also to the scenario of almost uniform magnitude of decline between these groups.] And this uniform pace of fertility reduction is also corroborated by very similar extent of sterilisation between these groups (Table 8). All this points to two (somewhat related) revelations. First, considerable voluntary fertility decline can occur amidst mass illiteracy, large-scale material deprivation (e.g. in living conditions, civic amenities and basic human needs, food) and slow infrastructural improvements. Second, and relatedly, two social groups with different socio-economic and material levels and circumstances can undergo a uniform pace of voluntary fertility reduction.²³ While the differential pattern of female autonomy and gender relations between tribal and non-tribal peoples (especially SC) could contribute to fertility differential only at a *given point* of time (see for example, Maharatna 2005), the reason for almost same *pace (and magnitude)* of fertility reduction must lie elsewhere. In fact

²¹ This conforms to fertility increase between mid-1950s and early 1960s, as suggested by other scholars (Dyson 2001, Dyson and Somawat 1983, Dyson and Murphy 1986, Mari Bhat 1998).

²² Only about two percent point lower fertility decline for SC (than of ST) during 1981-1992 (see Table 4) is indeed negligible, as the pace of decline becomes the same (at 20 percent) if respective TFRs for 1981 are considered for only rural areas.

²³ We have compared differential pattern of fertility declines between these social groups across all major states (not shown here). The fertility decline was relatively large in most states during 1971-1981 – the period, within which quite a coercive sterilisation programme was pursued under the Emergency of 1977-78, and a greater scope for large fertility reduction from its high initial levels existed. But in the following decade several major states witnessed, unlike West Bengal, smaller fertility declines among tribal population compared to non-tribal counterparts (Rajasthan, Andhra Pradesh, Gujarat, Orissa). Madhya Pradesh (erstwhile), home for bulk of tribals, had experienced the largest proportionate fertility decline in tribal communities in 1971-81, but it had slowed down over following two decades. In a few states, however, the pace of tribal fertility decline has been higher than that of SC during the 1990s (e.g. Gujarat, Bihar, Assam, Andhra Pradesh). However roughly uniform pace of fertility decline among ST and SC in WB during 1971-1991, despite the former being distinctly worse off than the latter, appears striking, even after comparison with some other states (and also with whole India, where they appear not very dissimilar in economic footing; see Maharatna 2005).

nuptiality *changes* (e.g. increase/decrease in age at marriage or proportion unmarried) (detailed elsewhere by us) do not appear large enough to explain fertility declines of this order.

Thus, what emerges from the foregoing is that actual scale of improvement in material, human and infrastructural levels does not match with a fairly fast fertility transition in WB (at least) by early 1990s. Consequently, role of ideational change and its diffusion must have been crucial. But conventional channels of diffusion (e.g. expansion of education and media exposure, effective and well-managed family planning programme with a strong demand-creation component, enhanced social interactions along with expansion of transport and communication) could, as was discussed previously, hardly been effective in WB.²⁴ It therefore seems plausible hypothesis that large-scale ideational change and its diffusion across has been greatly facilitated, directly and indirectly, by organised grassroots political mobilisation network of long-ruling Left Front – an issue, which we would examine now.

Ideational change toward fertility control and its diffusion: role of grassroots political mobilisation machinery and network of the Left Front

The poverty reduction in rural WB since the early 1980s, whatever has been its pace, is widely known to have accompanied a 'largely successful agrarian reform', and enhanced political participation. Although extent to which the latter have contributed to material elevation of rural masses is neither obvious nor easy to gauge, its role in bringing broad social changes and/or intensification of political awareness, empowerment, and participation is more readily and widely accepted. Despite limited (or indeed inadequate) increases in incomes and rural employment (and surviving large-scale rural poverty), what seems particularly notable is '[t]he creation of an *environment* conducive to growth and change through the mass mobilisation' (Basu and Amin 2000:783). For example, a well-disciplined grassroots political mobilisation process (and increasing politicisation) particularly in rural areas has helped raise social standing, dignity, self-confidence of hitherto low-ranking groups (e.g. SC) (e.g. Ruud 2003).²⁵ And all this is very likely to have improved their levels of aspirations, alertness and awareness pertaining to key aspects of well-being (including family size and fertility).

More specifically, it is highly plausible that disciplined and broad-based political mobilisation network of the ruling Left Front has been instrumental – directly or indirectly – in facilitating wide acceptance of family planning. While the issue of population control has

²⁴ WB's efficiency in administration of family welfare and health care programmes has never been particularly remarkable. [Even a hurried browsing of relevant statistics in annual reports of the Ministry of Health and Family Welfare amply testifies this]. In fact WB's relative failures in health and education were singled out as being responsible for its slower pace of fertility transition up to vis-à-vis Kerala's up to early 1980s (e.g. Nag 1984). Thus WB's rapid fertility decline subsequently, with these persisting *relative* failures, must extend beyond these south Indian routes.

²⁵ On remarkable organisational discipline, strategy, and mobilisation network of the Left Front, in which CPI(M) is overwhelmingly dominant, see e.g. Chatterjee et al. 1998, and Kohli 1991.

probably not been fronted in the agenda of the Left Front, it could not be buried either.²⁶ Indeed as we would argue shortly, grassroots level mobilising, monitoring and participatory activities of parties' major organs (e.g. among farmers, women, and students) have facilitated health and family planning department's performance – albeit somewhat indirectly e.g. via diffusion of ideational change and motivation for fertility control.²⁷ First, family planning, reproductive health, infant and child mortality have been figuring for long in the agenda for actions of the West Bengal Democratic Women's Association (WBDWA), the women's organ of CPI(M) (see West Bengal Unit's annual conference proceedings and reports). With a concern for population control alive in the awareness and perceptions of political leadership, it is reasonable to envisage that disciplined and growing network of mobilisation machinery has played facilitating (catalyst) role - especially in form of its motivation-building and awareness expansion effects favourable to fertility control and family planning. For example, '..especially in the rural areas, a large part of that party's [i.e. CPI(M) party, the biggest partner in the ruling Left Front coalition] cadre is in any case engaged on an *everyday basis* in political work at the village level in connection with the running of *panchayats*. The party can, even at short notice, without much difficulty, set up an effective machinery for a *door-to-door campaign* in almost every constituency in West Bengal' (Chatterjee et al. (1998) quoted in Gupta 2001:4320; italics added). Family planning programme and population control must have been a part of broad agenda and perceptions – albeit perhaps implicitly (at least initially)²⁸ – of the Left Front. Indeed there are scattered micro-level studies which posit Left Front's family planning drive having met with 'much more success' than its other drives such as adult literacy or movement against drinking (e.g. Lieten 1996:210-221).

Spread of awareness and motivation for fertility control should have been facilitated also by *panchayat*-and-party monitored adult literacy campaign, under which textbooks prepared contain some stories and lessons highlighting evils of large family.²⁹ In addition, this literacy programme (though it lost its initial tempo within a few years), together with participatory governance with mandatory female representation, have likely helped (at least indirectly) the spread of family planning messages by drawing women into public life (Lieten 1996:210). Indeed members of village civic body (*Gram Panchayat*) and local party cadres do take active interest in motivating mothers to send their children to the *Anganwadi* (the

²⁶ It is true that earlier Leftist stance was one of downplaying the importance of population control and family planning policy. But subsequent shift of the Leftist ideology towards becoming supportive of family planning programme (especially after China's major emphasis and achievements on population control front) is almost a commonplace.

²⁷ Adult literacy programme and campaigns, launched throughout the state in the early 1990s, should have contributed to effective diffusion of ideas and information in favour of fertility control, especially among rural women, despite mounting scepticism about its efficacy in achieving *effective* literacy (e.g. Acharya 1993).

²⁸ The first several years of the Left Front rule since 1977 were a period of backlash of Emergency-related coercive sterilisation excesses – a period when campaigns for family planning (particularly sterilisation) could hardly be undertaken.

²⁹ As communicated personally to me by Arild E. Ruud.

lady worker responsible for infants' and children's health, immunisations, nutrition in each village) under the Integrated Child Development Programme (e.g. Bhattacharya 2002:120). Likewise, local political leadership – especially of women's organs – did not just keep hands off from state programmes of making eligible couples aware of, and motivated and available for, undergoing sterilisation and/or other contraceptives. As for illustration, roughly 70-80 percent of Anganwadi workers come from local pool of members and cadres of WBDWA (personal conversation with officials of Kolkata unit). This clearly adds plausibility to the important role that we envisage to have been played by grassroots political mobilisation machinery and network in relatively fast fertility transition in rural WB. For instance, even a quick browsing of the printed resolutions of annual conferences of WBDWA for various years gives a clear indication of its strong concern and commitment for making state's family welfare programmes (including sterilisation and contraception) successful. My field conversations with several grassroots party cadres and villagers in some parts of rural WB have led me to believe that day-to-day and informal mobilisation, monitoring, and participatory activities, campaigns and conversations usually touch upon *inter alia* family planning and its virtues.³⁰

In verifying (statistically) the role of grassroots political mobilisation network as a major catalyst of ideational and motivational changes favourable to large-scale acceptance of family planning, we examine this plausible link with district-level data. For example, one indicator - albeit *ex post facto* - of mobilisation activities and network of a political party in a district could be *inter alia* the proportion of votes cast in its favour in state assembly elections. Likewise, levels and *increases* of district-level membership of party organs such as WBDWA and West Bengal Krishak Shaba (WBKS, farmers association) could capture even better the intensity of sustained mobilisation and its performance. Indeed some of these measures (e.g. membership of WBDWA) should have – understandably - more direct bearing on motivation-creation, spread of ideas and acceptance of family planning.

On the other hand, performance in spheres of family planning and fertility reduction in a district can be gauged by such measures as contraceptive prevalence rate (CPR) and magnitude of fertility decline in that district. These two sets of indicators can, in principle, be mediated by performance in some other spheres such as agricultural growth, poverty reduction, land/tenancy reforms implementation. A classification of relevant sets of variables, their definitions and data sources are detailed in Table A1 in Appendix.

The correlation coefficients (both simple and rank) involving several indicators pertaining to district-level attainment in political mobilisation, fertility reduction and family

³⁰ This envisaged diffusion mechanism for fertility control seems akin – at least consequentially – to the Dravidian social awareness and 'self-respect' movement, which, originating in the 1920s, involved grassroots mobilisation across rural TN. The local party leaders, who were often invited to preside over private marriage ceremonies, used to address the gathering and the newly wed couple on such matters as virtues of smaller family, gender equality, child quality and fertility control (e.g. Srinivasan 1995a:250-252, 255).

planning acceptance are presented in Appendix Table A2. As can be seen, among indicators of political mobilisation, the district WBDWA membership and its increase by early 1990s appear to have been significantly correlated with measures of district-level achievement in fertility reduction and family planning (e.g. contraceptive prevalence rate, fertility and its per cent decline). While district-level membership of farmers' organ of CPI(M) [WBKS] and its increase over 1981-1991 show highly significant positive (and expected) association with electoral support in the 1991 election, the former appear less strongly correlated with indicators of fertility reduction and family planning acceptance. Thus political mobilisation activities among farmers seem to have been more strongly geared towards electoral outcomes, but women's politicisation and participation has clearly had more powerful (and direct) effect on family planning acceptance and fertility reduction (especially up to early 1990s; see Fig A1 and A2 in the Appendix).³¹ This is much in line with contemporary demographic literature that often emphasises women's agency role in engineering large-scale voluntary fertility control. The following excerpts from the 1993 WBDWA conference resolutions illustrate succinctly the concerns of political leadership about such matters as rapid population growth, reproductive and child health, and more importantly, women's agency role in achieving rapid demographic transition:

...There is no doubt that such high population growth rate would lead our country to a horrifying crisis. Therefore population control is certainly an indispensable – but not the only - component of family welfare programme.Therefore for the sake of improvement of women's reproductive health and child welfare the family welfare programme has to be widely and effectively implemented. This programme can never succeed if we depend exclusively on state bureaucracy. Large section of our population, especially women, have to be strongly motivated about the importance of this programme. The various aspects of this programme have to be highlighted in women's consciousness. The women's association can do this job with its own initiatives and efforts.This conference resolves that our association would go forward with utmost strength for the success of this programme [family welfare programme]. (West Bengal Democratic Women's Association 1993: 19-20; author's own translation from the original Bengali document).

However, even high correlation coefficients between district-level indicators of political mobilisation (especially among females) on the one hand and measures of fertility, its decline, contraceptive prevalence on the other by themselves do not confirm our envisaged causal mechanism as such. For example, if high intensity of political mobilisation/participation is key to effective redistribution of land and tenancy rights, and to larger agricultural growth and poverty reduction, it is not clear whether WB's fertility transition should be attributed to political mobilisation and its (implied) diffusion effects *per se*.

³¹ This could reflect – as pointed out by the president of WBDWA – a (relative) neglect towards social issues vis-à-vis overriding political and electoral concerns of mobilisation activities through farmers' association (personal conversation).

Consequently we examine – by using inter-district cross-sectional correlation matrices - two sets of plausible relationships: first, whether rates of agricultural growth and poverty reduction are correlated with measures of political mobilisation/participation; second, whether poverty, its reduction, and agricultural growth evince significant association with intensity of land/tenancy reforms programmes. The coefficients involving poverty data need to be interpreted with particular caution, since in the absence of poverty estimates for each district, the estimate for a region has been applied to all districts of that region. As can be seen from Table A3, rural poverty seems to have been less in regions of high population density. This seems consistent with a scenario of prosperous and dynamic regions experiencing faster population growth and/or greater in-migration.³² Somewhat relatedly, neither magnitude of population-density nor its increase up to early 1990s seems to have had any significant correlation with magnitude of poverty reduction. In this context, the absence of significant correlation between agricultural growth and population density during the 1980s is indicative of the former being determined largely by such exogenous factors as geophysical features, irrigation and other infrastructural facilities (more on this shortly). [However, the magnitude of poverty *reduction* after the early 1990s (e.g. during 1993-1999) appears to have been less in the regions of high initial levels of population density (i.e. in 1981, 1991).]

Somewhat relatedly, district level poverty (in 1993) as well as its decline over preceding two decades (1972-1993) show significant correlation – respectively negative and positive – with district (weather-adjusted) growth rate of agricultural production during 1981-1991. While most of the mobilisation indicators seem to have almost negligible correlation with district level agricultural growth (by early 1990s), some of them (especially those pertaining to farmers’ and women’s associations) seem to indicate rather limited association with poverty and its reduction. Notwithstanding limitations of these coefficients (particularly since poverty indices refer to clusters of districts), district-level poverty reduction by early 1990s appears to have been significantly associated with agricultural growth, but neither of them seems to have had perceptible association with most of the district-level indicators of political mobilisation and participation. This is also clearly echoed in some important revelations from recent carefully conducted village-level surveys on the targeting of poverty alleviation efforts as well as general functioning of village panchayat in WB:

‘...targeting was poorer when land distribution became less equal, the poor less literate, when there were more low caste households, and local elections were less contested’ (Bardhan and Mookherjee 2003:18).

‘...we find no evidence of a positive, monotone relationship between land reforms and control of the local government by the Left’ (Bardhan and Mookherjee 2004:1)

³² In well-known Boserupian perspective, population pressure has historically served as a major catalyst for agricultural growth and innovations. Finding significant positive association between country per capita income and population density at global level, Mancur Olson explains this in terms of hypothesised scenario of higher incomes (due to better economic policies and institutions) leading to immigration and lower deaths rates, resulting in higher density (Olson 2001:48).

‘..the extent of state government funds and programmes to the panchayat level and extent of people’s participation in planning process in West Bengal is significantly less compared to that of Kerala’ (Ghatak and Ghatak 2002:53).

Indeed, all this conjures up a scenario wherein a government, when sustained by disciplined grassroots mobilisation machinery geared chiefly to ensuring electoral victory, may eventually lose incentives and perhaps motivation for effective implementation of land reforms and poverty alleviation efforts, and it can even afford to remain *relatively* aloof from taking what Macur Olson calls ‘encompassing interest’ in all-round development and growth (Olson 2001).

It is of interest to see how far district-level poverty, its reduction and agricultural growth are linked with various measures of pro-poor land and tenancy reforms (see Table A4). As can be seen, neither district-level cumulated amount of land distributed, nor the number of *barga* recording shows significant association with the growth of agricultural production and poverty reduction by the early 1990s. Thus, fairly strong association of political mobilisation/its increase (especially among rural women) with fertility/its decline up to early 1990s was hardly shaped through effects of land/tenure redistribution, agricultural growth and poverty reduction. This finding, however, should not be construed as being contrary to oft-emphasised dynamic efficiency and poverty-amelioration effects (e.g. Banerjee et al 2002, and Besley and Burgess 2000), and fertility-reducing potentialities (Desai and Alva 1998), of redistributive land and tenancy reforms.³³ However, it must be stressed that although WB’s redistributive agrarian reforms, when compared with many other states, appear remarkable, the overall scale has been plainly inadequate in proportionate terms (i.e. in relation to sheer size of rural sector and its aggregate needs). As for illustrations, the registration of ‘65 percent of an estimated 2.3 million share tenants’ by 1993 (Banerjee et al 2002:242) may appear no small a feat, but this cumulated number of registered tenants constitute only about 2.5 percent of the total rural households as per 1991 census. Likewise, total cumulated area covered under ‘operation barga’ up to 1991 (up to 2001) as a percentage of average net sown area during 1982-87 (2001-2002) turns out to be only about 8. While cumulated area distributed per beneficiary household by 1991 (by 2001) was only 0.46 acres (0.40), the cumulated number of beneficiaries constituted around 22 percent of total rural households. To express more succinctly in Bardhan and Mookherjee’s (2003:19) words: ‘the

³³ The study by Banerjee et al. (2002), based on panel data on WB’s 14 districts in 1979-1993, reports significant dynamic effects of ‘operation *barga*’ programme (measured by number of registered sharecroppers in each district) on rice *yield*. However this does not affect our present line of argument. But this paper is different – both in scope, aim, and method - from our cross-sectional district-level analysis. Likewise, a positive association between land reform and poverty reduction – reported in Besley and Burgess’s (2000) study based on panel data for 16 Indian states from 1952 to 1992 – does not undermine present argument based on district-level cross-section data for one state. Desai and Alva’s (1998) regression estimates for India (based on household-level data from NFHS) showing significant likelihood of fertility-reduction along with land redistribution should not be viewed as being *necessarily* contrary to our findings. WB’s district-level data however evince no significant association between fertility/fertility reduction or contraceptive prevalence and distribution of surplus land and operation *barga* in *proportionate terms*.

land reform program involved no more than 3-4% of cultivable land area outside North Bengal, a small fraction of overall change in the land distribution.'

To sum up thus far: the declines of population growth and fertility in WB have been more than commensurate with its very moderate achievement (relative to much of south and all-India) in all-round development indicators. The poverty reduction, though it seems considerable from high initial levels, turns up much less than enough for boosting poor masses' economic security and material aspirations to a level, which could warrant (judged on experiences elsewhere) its large-scale voluntary fertility control. Neither is it a case of 'poverty-led' fertility transition, as the poor did not show distinctly *greater* acceptance of family planning (as was probably the case in Kerala). Nor can a scenario of rapid expansion of education (especially among females), heralding demographic transition through its multiple agency roles (e.g. raising aspirations, imbibing rational attitudes, facilitating more gender equities and female autonomy) fit in with relevant records in WB (at least up to 1990s). But substantial fertility decline has occurred across a broad spectrum (including vulnerable social groups) well before anything resembling mass education, health and nutrition became a reality.

Thus, ideational change (favourable to smaller family) and its diffusion must have been important (at least up to early 1990s). But unlike elsewhere, grassroots political mobilisation network and organisation in WB – a state in which progress of economic, social and physical infrastructure, spread of media, information, and education have been distinctly limited and lacking – have been particularly instrumental to wide diffusion of family planning ideas and its acceptance.³⁴ This matches well with Indian family planning programme's strong predilection towards sterilization through camps and campaigns, which hinge largely on relatively quick mobilisation, rather than by way of disseminating relevant information and ideas on

³⁴ In a recent paper Basu and Amin (2000) attribute fertility declines in WB and Bangladesh (i.e. in both Bengals) in the 1980s and early 1990s to ideational/motivational diffusion, namely from Bengali elites (who began practising modern contraceptives quite early) down to common masses. This diffusion, as argument runs, has been facilitated by some common 'conditioning' factors, namely in language, history, and cultural identity. While it is scarcely surprising to find such commonalities between two Bengals, attributing to them a same diffusion mechanism raises difficulties. First, diffusion of ideas from elite down to masses - a mechanism, which, though it has illustrations from historical Europe, can hardly explain *broad-based* fertility decline that had occurred not earlier than 1970s. The elite of Bengal, as the authors note, began limiting fertility quite early, and these common 'conditioning factors' should have been present for a long time. For example, it is hard to substantiate an *effective* ideational diffusion emanating from elite (e.g. *bhadralok* or *babus*) down to illiterate 'subalterns', who were truly far removed from former's orbit. Hypothesising such diffusion process amounts in effect to ignoring influential subaltern (historical) perspective and related notion of Bengal's 'failed renaissance'. That Bengali elite were *more* modern (even on the count of fertility control) than their other Indian counterparts has not been, *historically speaking*, echoed in the fertility behaviour of Bengal's vast subaltern (uneducated) masses, despite newer and newer heights achieved by Bengal's intellectuals. [Two Indian Nobel laureates are from Bengal!]. As for an illustration: a fertility survey in Calcutta in 1970 (by Indian Statistical Institute) found the fertility of higher caste Hindus *lower* by (at least) 40 percent as compared to that of other Hindus (Indian Statistical Institute 1970). Second, identifying long-term conditioning factors for fertility control falls short of explaining - on the basis of concrete empirical evidence - its actual *occurrence*. Devoid of detailed evidence, the argument remains broadly conjectural. Unlike WB, Bangladesh has achieved pervasive family planning and services via wide network of door-to-door visit. This differential in diffusion channel between two 'Bengals' has had notable implications for both pace and method-composition of fertility

contraceptive methods as well as their easy delivery at door-steps.³⁵ For example, despite lower levels of exposure and accessibility to media and information among tribal population (vis-à-vis SC group), there has been virtually no difference in acceptance of sterilisation (Table 7).

Fairly rapid fertility transition in an environment of sluggish material and human development is not unique to WB (Bangladesh being a case in point). What distinguishes WB however is the importance of a diffusion mechanism, which has come as a ‘by-product’ of mass mobilisation network of the ruling political parties, instead of via more conventional channels e.g. expansion of (female) education, media exposure and communication, and/or door-to-door comprehensive family planning programme. This seems to provide some clue to the recent revelation that illiterate and uneducated women are currently making a big contribution to India’s overall fertility decline.³⁶ In a fairly rigorous econometric study of determinants of contraceptive use among uneducated women, some of the largest unexplained ‘residuals’ at district-level are found in WB, pointing to (relative) predominance of unconventional diffusion channels in the state (McNay et al. 2003:37-38). The present revelation that grassroots political mobilisation network and activities have played an important catalyst role in overall diffusion mechanism in the state provides (at least partial) clue. It is however hard to deny that even rather sluggish improvements in social, physical, and economic infrastructures and human wellbeing have had cumulative and combined contributions to the emergence of felt need for smaller family, but this must have been very gradual and hence relatively feeble. But the benefits of fairly fast fertility transition chiefly through unconventional diffusion channels – which are not backed by commensurate infrastructure build-up and human development – could conceivably prove difficult to internalise and/or may get even nullified by longer-term adverse implications. One such adverse scenario could be in form of what I call ‘demographic revenge’, namely a pattern of migration flow that pulls back the state from catching up with more developed and dynamic ones – a theme to which we would turn now.

‘Vicious’ migration flows in contemporary West Bengal: a demographic revenge?

As build-up of infrastructure – physical, social and human - is key to paving way for steady economic growth and employment expansion, a distinctive (relative) failing on this – as has clearly been the case in WB – would induce qualitatively better segment of the educated, skilled, professional and urbane population to flee away – by dint of ‘superior’ capabilities, faculties, and aspirations – from the state. Conversely, a large pool of unskilled and asset-less poor people would flock in to become ‘happier’ in a more ‘lenient’ and poor-friendly social-institutional-political environment consistent with an overriding political

decline (see e.g. Maharatna 2002).

³⁵ Of about 39 per cent of couples protected against pregnancy in WB by end of March 1995 more than 32 per cent was on account of sterilization (West Bengal 1995:42).

³⁶ As per NFHS data, about 65 percent of India’s fertility decline in the 1990s is contributed by

priority for maintaining underprivileged common masses' electoral support.³⁷ It is indeed a challenging task – though possible and useful - to examine and establish this envisaged scenario just sketched.³⁸ We would make only a beginning by looking at aggregative census information. The premise of the argument is rather simple. It is highly presumable that among four possible streams of inter-state 'lifetime' migration flows,³⁹ the migrants from urban areas of a state to urban areas of another state (called urban-urban lifetime inter-state migration) would consist of proportionately large number of educated, skilled, semi-skilled professionals. Likewise, rural-rural out-migrants from a state should largely be those who are unskilled (and uneducated) farm labourers, and rural-urban (lifetime) out-migrants would be comparatively unskilled or semi-skilled people, moving out from rural areas of a state for a job in urban/industrial/informal areas in another state. There would of course be imperfections in such categorisation on the basis of place of birth data (e.g. response and enumeration errors). But some broad and general indications can still be gleaned beyond reasonable doubt.

The urban-urban lifetime out-migrants from a state are those who were born in any urban area of the state, but are enumerated in an urban area of another state. By same token urban-urban in-migrants in a state are those, who are enumerated in that state, but were born outside the state. Table 8 presents composition of male lifetime inter-state migrants between these four categories of migration flows for a few selected states and India as a whole for 1981 and 1991. As can be seen from Table 8a, the urban-urban flow constitutes highest share of 44-47 per cent in total number of lifetime male out-migrants from WB [followed by TN/Kerala], while the corresponding figures for Bihar and Orissa are only around 17-19 per cent. Conversely, the proportion of rural-urban flow constitutes nearly half of the total lifetime male out-migrants from the latter, while for WB this is only around 23-25 per cent, indeed the lowest among all major states. This comparative picture is broadly borne out by NSSO migration data of 55th Round (1999-2000) (NSSO 2001: Table 9:57). Thus there emerges a distinct suggestion that irrespective of its share in overall lifetime male out-migrants within the country, WB experiences the largest exodus - *in proportionate terms* - of urbanite, skilled and educated people to other states within the country. No less importantly, there seems to have been accentuation of such exodus over more recent years. For example, WB's highest share of

uneducated women (Bhat 2002).

³⁷ Virtually uninterrupted inflow of unskilled and uneducated people into WB over past several decades, which has contributed to a swelling slum landscape, particularly in and around Kolkata, is almost a commonplace. No less known is its role in serving ruling political parties' interest from the standpoint of latter's chief preoccupation with poor maintaining peoples' mobilisation for electoral success (e.g. Thomas 1999; Kohli 1991).

³⁸ This scenario is distinct in terms of its focus (e.g. composition of migrants) from those often highlighted in the literature on differential trends of inter-state migration rates across regions marked by divergent level and rate of growth and urbanisation (e.g. Kundu and Gupta 1996)

³⁹ 'Lifetime' migrants are those who are enumerated outside their place (state, town, village) of birth. Thus a lifetime out-migrant from WB is one who was born in the state but enumerated somewhere outside of WB, and by the same token he would be classified as an in-migrant in the state in which he is enumerated. And vice versa.

urban-urban flow to total male lifetime out-migration has increased between 1981-1991 [from 44 to 47 per cent as against all-India increase from 30 to 32 per cent]. The percent point increase in the proportion of urban-urban male outflow has been larger in Kerala – a state from which out-migration of skilled professionals to other states and beyond for long has been viewed as being conducive to (e.g., remittances) to its overall economic growth.

However, a same share of urban-urban flow in total lifetime out-migration between two states should ideally mean different *effective* magnitudes of exodus of urban-urban category if relative size of urban population differs. Indeed share of urban-urban flow in total inter-state out-migration from a state (vis-à-vis another) could be larger just because of former's larger *relative* size of urban population. Therefore influence of differential urban size should be neutralised before urban-urban flow of out-migration can reflect its true differential across states. This true measure (index) of urban-urban outflow should be higher (lower) when relative size of urban population is smaller (larger) in the sending state, and hence we derive this index by dividing proportion of urban-urban out-migrants by proportion of urban population in that state. The last column of Table 9a provides these indices of male urban-urban exodus. While Kerala seems to have topped (followed by WB) as sender of urbanite and skilled people relative to its size of urban population in 1981, WB surpassed even Kerala in 1991 to become the largest sender of such people in proportionate terms. Indeed neighbouring states, namely Bihar, Orissa, Uttar Pradesh, which are less urbanised, turn out (after such adjustment) to be above (national) average senders of urbane, skilled and educated male lifetime out-migrants. To illustrate: although share of urban-urban type of male out-migration from TN is much higher than Bihar's, discounting for former's greater proportion of urban population (30 percent as against Bihar's 14) translates former's rank into being lower than the former as sender of urbanite, educated and skilled population.

The implications of losing relatively more of urbanite, educated and skilled people could indeed be far-reaching and not readily quantifiable. But it may be useful to try to envisage key chain of its reactions on economy and society at large. In case of international permanent migration, the loss to sending country is commonly thought to arise because the substantial expenditure, which is incurred out of public exchequer to train professionals who subsequently emigrate, cannot be recouped by their specialist services. But 'loss' to the sending state via inter-state permanent out-migration can hardly be measured so narrowly, partly because out-migrants are not leaving their own country, and partly because many of them got trained in the receiving state itself. For example, a large number of proven 'good', as well as potentially bright, students get admission to various prospective pursuits and programmes within the country itself for a better professional training and career. Thus loss to the sending state does not seem as obvious as is often measured in pecuniary terms at the international plane (within a notion of brain drain).

The 'real loss' to a sending state, it can be argued, would be more than what is generally

captured in readily obvious pecuniary terms. For one thing, this urban-urban lifetime out-migrants, who quit their own state to settle in a fast-growing, dynamic region with strong pull forces, are arguably a selective group of more capable, aspiring and enterprising people (*vis-à-vis* many of those who stay back). The justification for this proposition stems partly from the fact that these 'successful' out-migrants had to compete out their peers from many other states including the one where they settle. This reasoning should hold good more or less for all directions of lifetime out-migration (including those from rural areas), though of varying significance and bearing. This is rather general and perhaps somewhat simplistic statement, and this is by no means meant to ignore or deny the inherent complexity and variety of circumstances in which people decide to quit own place of birth.

By the same token a large chunk of the remaining (urban) population could be hypothesised to be intrinsically of (*generally* and not invariably) mediocre calibre and capabilities. This should have snowball adverse implications for sending regions like WB, as these mediocre counterparts, who remain available in the state, would man majority of the key responsible positions - in administration, services, or production. To make matter worse, relatively bright and capable professionals would not be much forthcoming voluntarily from outside the state, simply because of its very weak pull forces in the first place. This sustained exodus of relatively better quality people would increasingly stifle the prospect of steady emergence of a 'developmental state' which would ensure an insulation of technocratic elite in charge of policy-making from ravages of mobilisation-centred day-to-day politics – the development path, which been the key to much of East Asia's recent economic successes.⁴⁰ Stunted emergence of such 'developmental state' may on the contrary reinforce an inferiority-bred apathy and arrogance, which would likely further jeopardise the prospect of healthy interaction with, and advice from, more dynamic pockets and people outside the state. Consequently, methods, strategies, plans, action at almost all levels would likely be bearing an imprint of mediocrity (manifest chiefly in form of low efficiency, innovativeness and ingenuity). This could in turn have had caused lower levels of productivity, quality of delivery and services than what would have been the case if the 'better' lot, who had left the state, would have stayed back with sway. While this argument sounds perhaps simplistic, this, I believe, is high time that this envisaged connection be put into rigorous empirical tests from various angles.⁴¹

Interestingly, nor the converse of out-migration, namely in-migration stream, seems to have a potential for generating countervailing forces. Instead, it, if anything, should compound migration-related adversity, as the most dominant in-migration flow would be, in line with our reasoning, by relatively uneducated and unskilled folk from neighbouring

⁴⁰ For useful discussion on the notion of developmental state and its features, see Bardhan 2001:256-257.

⁴¹ See Maharatna (2003, 2004) for rather casual illustrations of such adverse implications for the quality of decisions, policies and administration in various sectors (in e.g. railways, education).

worse-performing states. The volume of lifetime in-migration into WB has been increasing over past decades, but the share of urban-urban flow – in conformity with our foregoing argument has been one of the lowest (Table 8b). The relative meagreness of inflow of urbanite, educated and skilled people into WB gets more strongly vindicated by urbanisation-adjusted indices. Conversely, the share of *rural-urban* type (i.e. mostly those who are presumably uneducated and unskilled, and who generally crowd in urban (informal) landscape) is – proportionately - much greater in the state than many other states (and of course all-India) (Table 8b). Indeed its proportion has been the highest in WB (58-59 per cent) during 1981-1991, while corresponding figure for urban-urban type among male in-migrants (21-22 per cent) is much lower than most other states and all-India (31-32 per cent). A higher proportion of rural-urban flow of male in-migration could conceivably signify higher demand for industrial workforce (as is most likely the case with Maharashtra where this figure is 53-55 per cent). But, alas, WB's industrial scene, though it used to conjure up precisely such a dynamic image around Independence, can no longer enthuse one to believe this happening in the contemporary period. [While index of industrial production of India increased by 132 per cent from 1980 to 1993-94, it increased only by 34 per cent in WB. Likewise, the share of manufacturing sector in domestic product fell from 34 per cent in 1982-83 to 26.5 per cent in 1995-96, while it increased from 25 to 29 per cent at all-India.] However, Left Front's ability both to bypass the BIMARU stigma and to sustain ballot-box success, fed into its ability – albeit *unenviable* - to bypass the painful job of impassionate 'soul-searching' and of taking an 'encompassing interest' in the all-round development of the state.

References:

- Acharya, S., R. Cassen and McNay, K. (2004), 'The Economy – past and Future', In: Dyson, T., R. Cassen, and L. Visaria (eds): *Twenty-first Century India*, New Delhi: Oxford University Press.
- Acharya, P. (1993), 'Panchayats and Left Politics in West Bengal', *Economic and Political Weekly*, 29 May: 1080-1081.
- Ali, I. And E. M. Pernia (2003), 'Infrastructure and Poverty Reduction: What is the connection?', *ERD Policy Brief Series, No.13*, Asian Development Bank.
- Anthony, T.V. (1992), 'The Family Planning Programme: Lessons from Tamil Nadu's Experience' – paper presented at the Symposium on India's Development in the 1990s (New Delhi: Centre for Policy Research).
- Banerjee, A., P.J. Gertler, and M. Ghatak (2002), 'Empowerment and efficiency: Tenancy reform in West Bengal', *Journal of Political Economy*, 110(2):280.
- Bardhan, P. (2001), 'The Nature of Institutional Impediments to Economic Development', In: Kähkönen and Mancur Olson (eds), *A New Institutional Approach to Economic Development*, New Delhi: Vistaar Publications
- Bardhan, P. and D. Mookherjee (2003), 'Poverty Alleviation Effort of West Bengal Panchayats', mimeo, [www/globetrotter.Berkeley.edu](http://www.globetrotter.Berkeley.edu).
- Bardhan, P. and D. Mookherjee (2004), 'Political Economy of Land Reforms in West Bengal 1978-1998', mimeo, <http://eco.bu.edu>

- Basu, A.M. (1986), 'Birth Control By Assetless Workers in Kerla: The Possibility of Poverty-Induced Fertility Transition', *Development and Change*, 17(2).
- Basu, A.M. and Amin, S. (2000), 'Conditioning Factors for Fertility Decline in Bengal: History, Language Identity, and Openness to Innovations', *Population and Development Review*, 26(4).
- Basu, A.M. (1989), 'Is Discrimination In Food Really Necessary for Explaining Sex Differentials in Childhood Mortality?', *Population Studies*, July 1989, 43(2): 193-210.
- Besley, T. and Burgess (2000), 'Land Reforms, Poverty Reduction and Growth', Evidence from India' *Quarterly Journal of Economics*:LXV(2).
- Bhat, Mari P.N. (1998), 'Emerging Regional Differences in Fertility in India: Causes and Correlations', in Martine et al (1998).
- Bhat, Mari P.N. (2002), 'Returning a favour: Reciprocity between female education and fertility', *World Development*, 30(10):3008-3032.
- Bhattacharya, M. (2002), *Panchati Raj in West Bengal: Democratic Decentralisation or Democratic Centralism*, New Delhi: Manak Publications.
- Birdsall, N. and Sinding (2001), 'How and Why Population Matters: New Findings, New Issues', In: Birdsall, N.,A.C. Kelley and S.W. Sinding (eds) (2001), *Population Matters*, Oxford: Oxford University Press.
- Bongaarts, J. and Watkins, S.C. (1996), 'Social Interactions and Contemporary Fertility Transition', *Population and Development Review*, 22(4):639-682.
- Caldwell, J.C. (2001), 'Globalisation of Fertility Behaviour' In: Bulatao and Casterline(eds) (2001).
- Clark, G. and S. Wolcott (2003), 'One Polity, Many Countries: Economic Growth in India, 1873-2000', mimeo, Dept of Economics, University of California, Davis.
- Cleland, J., Wilson, C. (1987), Demand Theories of Fertility Transitions: Iconoclastic view. *Population Studies*, 41,5-30.
- Cleland, J.(2001), 'The Effects of Improved Survival of Fertility: A Reassessment', In: Bulatao and Casterline (2001).
- Chakraborty, G. and Ghosh, P.K. (2000), *Human Development Profile of Scheduled Castes and Tribes in Rural India: A Bench Mark Survey*, New Delhi: National Council of Applied Economic Research.
- Chatterjee,B.(1998), 'Poverty in West Bengal: What we have Learnt', *Economic and Political Weekly*, 33 (47/48):3003-3018.
- CMIE (1997), *Profiles of States*, Mumbai
- Das Gupta, M. (1995), 'Fertility Decline in Punjab, India: Parallels with Historical Europe', *Population Studies*, 49(3): 481-500.
- Das Gupta, M. (1999), 'Liberté, Egalité, Fraternité: Exploring the Role of Governance in Fertility Decline', *Journal of Development Studies*, 35(5).
- Das Gupta, M. (2001), 'Synthesizing Diverse Interpretations of Reproductive Change in India', in Sather and Philips (2001).
- Deaton, A. (2001), 'Adjusted Indian Poverty Estimates for 1999-2000', *Sarvekshana* 24(2/3), 85th Issue.
- Deaton, A. and Drèze, J. (2002), 'Poverty and Inequality in India', A Re - Examination', *Economic and Political Weekly*, Sep7(2002) PP.3729.
- Dev, Mahaendra and A. Ranade, 'Poverty and Public Policy: A mixed record', In: K. Parikh (ed): *India Development Report 1997*, Delhi: Oxford University Press.
- Dev, Mahendra, K.S. James, and B. Sen (2002), 'Causes of Fertility Decline in India and Bangladesh: The role of community', Working Paper No.45, Centre For Economic and Social Studies, Hyderabad.
- Desai, S. and S. Alva (1998), Land Redistribution: A Population Stabilisation Strategy', *Economic and Political Weekly*, 7 March.
- Drèze, Jean and A. Sen (1995), *India: Economic Development and Social Opportunity*, Delhi: Oxford University Press.
- Drèze, Jean and A. Sen (2002), *India: Development and Participation*, Delhi: Oxford University Press.
- India', *Population and Development Review*,27.

- Dyson, T. and Murphy, M.(1985), 'The Onset of Fertility Transition', *Population and Development Review*, 11.
- Dyson, Tim and G. Somawat, 'An Assessment of Fertility Trends in India' in Srinivasan and Mukerji (1983).
- Dyson, Tim (2001), 'Birth Rate Trends in India, Sri Lanka, Bangladesh and Pakistan: A long, Comparative View', in Philips, J. and Sathar, Z. (eds), *Fertility Transition in South Asia*, Oxford University Press.
- Gazdar, H. and Sengupta, S. (1999), 'Agricultural Growth and Recent Trends in Well-Being in Rural West Bengal', In Rogaly et al. (eds) (1999).
- Ghatak, M. and M. Ghatak (2002), 'Recent Reforms in the Panchayat System in West Bengal: Towards Greater Participatory Governance?', *Economic and Political Weekly*, 5 January.
- Govt. of India, Ministry of Planning, Dept of Statistics (1994b), *Sarvekshana*, 18(1), July-Sept, 1994, Issue No.60.
- Govt. of India (2001), *Reported Adequacy of Food Intake in India 1999-2000*, Ministry of Statistics and Programme Implementation
- Gupta, A. (2001), 'Left Front Rule in West Bengal: Domination without Hegemony', *Economic and Political Weekly*, 36(45), 10 November.
- Hanstad, T. and J. Brown (2001), 'Land Reform Law and Implementation in West Bengal: Lessons and Recommendations', *RDI Reports on Foreign Aid and Development # 112*, Rand Development Institute, Seattle, USA.
- Harriss, J. (1993), 'What is happening in Rural West Bengal? Agrarian Reform, Growth and Distribution', *Economic and Political Weekly*, 12 June.
- Harriss, J. (1998), 'Development Studies and the Development of India: An Awkward Case?', *Oxford Development Studies*, 26(3):287-309.
- Indian Statistical Institute (1970), *Calcutta Fertility Survey*, Calcutta.
- International Institute For Population Sciences (1995), *India, National Family Health Survey 1992-93*, Bombay.
- International Institute For Population Sciences (2000), *India, National Family Health Survey 1998-99*, Bombay.
- James, K.S. (1999), 'Fertility Decline in Andhra Pradesh: A search for alternative hypotheses', *Economic and Political Weekly*, 20 February.
- James, K. S. and S.V. Subramanian (2005), "Decline in Fertility in Andhra Pradesh: A reexamination of conflicting arguments' In: Guilmoto, C.Z. and S.I. Rajan (eds) (2005), *Fertility Transition in South India*, New Delhi: Sage.
- Kohli, Atul (1991), *Democracy and Discontent: India's Growing Crisis of Governability*, Cambridge: Cambridge University Press.
- Kundu, A. and S. Gupta (1996), 'Migration, Urbanisation and Regional Inequality', *Economic and Political Weekly*, 28 December:3391-3398.
- Kumar, A.K. Shiva (2003), 'Marked Difference: Community in Elementary Education', *Times of India* (Pune Edition), 8 January.
- Kulkarni, P.M., S. Krishnamoorthy and N. Audinarayana (2002), 'Review of Research on Fertility in Tamil Nadu', *Demography India*, 31(1):17-36.
- Lieten, G.K.(1996), *Development, Devaluation and Democracy: Village Discourse in West Bengal*, New Delhi; Sage Publication
- Maharatna, Arup (2002), 'India's Family Planning Programme: An unpleasant essay', *Economic and Political Weekly*, 37(10), 9 March.
- Maharatna, Arup (2003), 'Migration, Mediocrity, and 'Misery': Case of West Bengal', *Economic and Political Weekly*, 22 February: 679-683.
- Maharatna, Arup (2004), 'Bengal Dreaming', *Economic and Political Weekly*, 31 July.
- Maharatna, Arup (2005), *Demographic Perspectives on India's Tribes*, New Delhi: Oxford University Press.
- Malhotra, R. (1997), 'Incidence of Poverty in India: Towards A Consensus on Estimating The Poor', *Indian Journal of Labour Economics*, 40(1).
- McNay, K., P. Arokiasamy, and R.H.Cassen (2003), 'Why are uneducated women in India using contraception? A multilevel analysis', *Population Studies*, 57(1):21-40.

- Meenakshi, J. V., Ray R. and Gupta, S. (2000), 'Estimates of Poverty for SC, ST and Female Headed Households', *Economic and Political Weekly*, 29 July.
- Mehta, A.K. and A. Shah (no date), Chronic Poverty in India: Overview Study, Chronic Poverty Research Centre Working Paper 7.
- Mitra, S., S.D. Brahmankar and V. Handa (2004), 'Rural Poverty and Rural Infrastructure: The case of India', *Empirical Economics Letters* 3(3):136-142.
- Nagarajan, R. (1997), 'Lower Fertility T.N.'s Success' *The Hindu*, Oct 1997.
- Nag, M. (1984), 'Fertility Differential in Kerala and West Bengal: Equity - Fertility Hypothesis as Explanation', *Economic and Political Weekly*, 21(1)33-34.
- NCAER (2002), *Who benefits from public health spending in India*, New Delhi: NCAER.
- Olson, Mancur (2001), 'Big Bills Left on the Sidewalk: Why Some Nations are Rich and Others Poor' In: Kähkönen and Mancur Olson (eds), *A New Institutional Approach to Economic Development*, New Delhi: Vistaar Publications.
- NSSO (2001), *Migration in India 1999-2000*, New Delhi.
- Parthasarthy, G. (1996), 'Trends in Wages and Employment of Agricultural Labourer', *Indian Journal of Agricultural Economics*, Vol.51(1,2) Jan - June, PP:145-167.
- Radhakrishna, R. and C. Ravi (2004), 'Malnutrition in India: Trends and Determinants', *Economic and Political Weekly*, 34(7).
- Ravallion, M. and G. Datt (2002), 'Why has economic growth been more pro-poor in some states of India than others?', *Journal of Development Economics*, 68:381-400.
- Ram, F. and S.K. Mohanty (2003), *State of Human Development in States and Districts of India*, International Institute For Population Sciences, Mumbai.
- Ramesh, B.M., S.C. Gulati and Robert D. Retherford (1996), *Contraceptive Use in India 1992-93*, National Family Health Survey Subject Reports Number 2, Mamba and Honolulu.
- Raychaudhuri, A. (2004), 'Lessons from the Land Reform Movement in West Bengal, India' – paper presented at 'Scaling up Poverty Reduction: A global process and conference' held by IBRD/World Bank at Sanghai, May 25-27, 2004. (mineo) www.eldis.org/static/DOC17932.htm.
- Rogaly, Ben, Harriss-White, B. and Bose, S. (eds) (1999), *Sonar Bangla? Agricultural Growth and Agrarian Change in West Bengal and Bangladesh*, New Delhi: Sage Publications.
- Ruud, A.E (2003), *Poetics of Village Politics: The Making of West Bengal's Rural Communism*, New Delhi: Oxford University Press.
- Saha, A. and Swaminathan, M. (1994), 'Agricultural growth in west Bengal in 1980's, A Disaggregation by Districts and Crops', *Economic and Political Weekly*, 26th March.
- Saran, R. (2004), 'India's Best and Worst States', *India Today*, 16 August 2004.
- Sebastian, A. (1992), 'Salient Features of Internal Migration' In: Srinivasan, K. and K.B. Pathak (eds) (1992), *Dynamics of Population and Family Welfare 1991*, New Delhi: Himalaya Publishing House...
- Sen, Amartya (1997), 'Radical Needs and Moderate Reforms', In: Dreze and Sen (eds): *Indian Development: Selected Regional Perspectives*, New Delhi: OUP
- Sengupta, S. and Gazdar, H. (1997), 'Agrarian Politics and Rural Development in West Bengal', In: Drèze and Sen (1997).
- Shaban, A. (2002), 'Growth and Disparities of Incomes Across Indian states', *Man & Development*, September.
- Shariff, A. (1999), *India: Human Development Report*, New Delhi: Oxford University Press.
- Singh, R. (2004), 'Rural Infrastructure, Agricultural Development and Poverty in India: Inter-State Study', *Journal of Rural Development*, 2(1):31-57.
- Srinivasan, K. (1995a), 'Lessons from Goa, Kerala and Tamil Nadu: The three successful fertility transition states in India', *Demography India*, 24(2):163-194.
- Srinivasan, K. (1995b), *Regulating Reproduction in India's Population: Efforts, Results, and Recommendations*, New Delhi: Sage Publications.
- Sundaram, K. (2001), 'Employment and Poverty in 1990s: Further Results from NSS 55th Round Employment-Unemployment Survey, 1999-2000', *Economic and Political Weekly*, 11 August.
- Swaminathan, and V.K. Ramachandran (1999), 'New Data in calorie intakes', *Frontline*, 16(5).
- Tendulkar, S., Sundaram, K. and Jain, L.R. (1993), *Poverty in India, 1970-71 to 1988-89*, ILO ARTEP, Delhi.

- Thangraj, M. (1995), 'Demographic and Occupational Characteristics of the Scheduled Castes and Scheduled Tribes in India', Working Paper 134, Madras Institute of Development Studies, Madras.
- Thomas, F. C. (1999), *Calcutta: The Human Face of Poverty*, Delhi: Penguin.
- West Bengal, Dept of Health and Family Welfare (1995), *Family Welfare Statistics: At a Glance*
- West Bengal Democratic Women's Association (1993), Draft Resolutions on State Conference during March 27-29, 1993 [English translation mine].
- Yao, X. (2003), 'Infrastructure and poverty reduction – making markets work for the poor', *ERD Policy Brief Series No.14*, Asian Development Bank.

Table 1: Broad Demographic Trends in West Bengal in a Comparative perspective

West Bengal	Kerala	Tamil Nadu	Andhra Pradesh	India
--------------------	---------------	-------------------	-----------------------	--------------

Growth rate of population (%)	26.87	26.29	22.30	20.90	24.80
1961-71	23.17	19.24	17.50	23.10	24.66
1971-81	24.55	14.06	14.94	23.91	23.56
1981-91	17.84	9.42	11.19	13.86	21.35
1991-2001					
Density of population (population per sq. km.)					
1951	296	349	232	113	117
1961	394	435	259	131	142
1971	499	549	317	158	177
1981	615	655	372	195	216 ^{ad}
1991	767	749	429	242	267 ^{bd}
2001	904	819	478	275	324 ^c
Crude Birth Rate (per 1000)					
1981-83	32.5	25.6	27.9	31.2	33.8
1985-87	29.9	21.5	24.1	30.6	32.6
1990-92	26.6	18.5	21.0	25.5	29.5
2000	20.7	17.9	19.3	21.3	25.8
% Decline					
1980's	18.2	27.7	24.7	18.3	12.7
1990's	22.2	3.2	8.1	16.5	12.5
Total Fertility Rate					
1970-72	-	4.1	3.9	4.7	5.2
1980-82	4.2	2.9	3.4	3.9	4.5
1990-92	3.2	1.8	2.2	3.0	3.7
1996-98	2.6	1.8	2.0	2.5	3.3
2001	2.6*	1.7*	1.8*	2.3*	3.2*
% Decline					
1980's	23.8	37.9	35.3	23.1	17.8
1990's	18.8	5.6	18.2	23.3	13.5
Crude Death Rate (per 1000)					
1981-83	10.6	6.6	11.6	10.7	12.1
1985-87	9.1	6.2	9.6	10.0	11.3
1990-92	8.3	6.1	8.6	9.3	9.8
2000	7.0	6.4	7.9	8.2	8.5
% Decline					
1980's	21.7	7.6	25.9	13.1	19.0
1990's	15.7	4.9	8.1	11.8	13.3
Infant Mortality Rate					
1981-83	87	34	87	81	107
1985-87	72	29	79	81	96
1987-91[NFHS-I]	75.3	23.8	67.7	70.4	78.5
1990-92	66	17	58	71	80
1993-97[NFHS-II]	48.7	16.3	48.2	65.8	67.6
2000	50.7	13.9	51.0	65.4	67.8
% Decline					
1980's	24.1	50.0	33.3	12.3	25.2
1990's	23.2	18.2	12.1	7.9	15.3
Expectation of Life at birth					
(e ₀)	57.4	68.4	56.9	58.4	55.9
	61.5	72.0	62.4	60.6	59.4
	61.6	72.7	62.9	61.2	60.0
	62.1	72.9	63.3	61.8	60.3
1981-88	62.4	73.1	63.7	62.0	60.7
1989-93	62.8	73.3	64.1	62.4	61.1
1990-94					
1991-95	7.1	5.3	9.7	3.8	6.3
1992-96	2.0	0.8	1.9	2.0	1.8
1993-97					
% Increase					
1981-93					
1990-97					
Sex Ratio (F/M)					
	878	1022	992	981	941
1961	891	1016	978	977	930
1971	911	1032	977	975	934 ^{ad}
1981	917	1036	974	972	927 ^{bd}
1991	934	1058	986	978	933 ^c
2001					

Source: TFR: Visaria (2004); IMR, CBR, CDR, population density, growth rate, sex-ratio, life expectancy: *Economic and Political Weekly (EPW)*, Vol. XXIX, No. 21, May 21, 1994; *Selected Socio-Economic Statistics, India*, various years, CSO, Ministry of Statistics and Programme Implementation, Govt. of India; *The Indian Child: A Profile 2002*, Dept. of Women and Child Development, Ministry of HRD, Govt. of India; *Health on the March, West Bengal 2000-2001* (West Bengal Health System Development Programme)

* Guilimoto & Rajan EPW, 2002, Feb.

^a Interpolated figures for Assam

^b Projected population figures for J & K

^c Estimated figures for Kachchh and few other talukas affected by natural calamities in Gujarat.

^d Disputed areas for Jammu & Kashmir excluded

Table 2 Broad Socio-Economic Development Indicators: West Bengal in a Comparative Perspective

Indicators	West Bengal	Kerala	Tamil Nadu	Andhra Pradesh	India
Production/Income					
<i>NSDP (Rs) in Agriculture at constant prices per capita #</i>					
1980-81-1982-83	412.9	503	391.2	668.5	589.9
1983-84-1985-86	505.2	476.9	442.1	658.0	624.9
1986-87-1988-89	580.1	494.9	476.2	605.7	613.4
1993-94-1995-96	2136.8	2202.1	2168.9	2,404.0	2,404.0
1996-97-2000	2437.7	2205.5	2140.7	2,550.0	2,550.8
Growth rate of real per capita state domestic product (% per annum):					
1980s	2.5	2.3	4.0	3.5	3.3
1990s	4.7	5.1	5.8	3.5	4.4
Annual Growth rate of SDP, 1970-90	1.9	2.7	3.2	3.0	-
Unemployment Rate (% of labour force) (current daily status)					
1987-88	8.1	21.2	10.1	7.4	6.1
1993-94	9.9	15.5	11.4	6.8	6.0
1999-2000	15.0	20.8	12.1	7.9	7.3
Consumption/ Nutrition/ Poverty					
<i>Average Monthly Consumption Expenditure Per Capita Rural Population (Rs)</i>					
1977-78	59.3	74.3	63.3	69.7	68.9
1983-84	104.6 [40.5]	145.2 [52.2]	112.2 [39.0]	115.6 [44.7]	112.3 [41.2]
1986-87 [1987-8 at 1970-1 prices]	139.0	195.8	140.0	140.9	140.9
1993-94 [at 1983 prices]	279.0 [105.6]	[134.7]	[124.8]	289.0 [138.6]	281.0 [122.3]
1999-2000	358.0	604.0	381.0	386.0	382.0
<i>Nutritional deficiency (%) Children (Rural)</i>					
1975-79 (NNMB)	60.6	56.8	59.6	60.5	62.5
1991-92 (NNMB)	60.6	35.6	52.4	56.8	56.2**
1998-99 (NFHS2)*	48.7	26.9	36.7	37.7	47.0
2000-01 (NNMB)	49.6	28.8	39.0	39.9	47.7**
<i>Proportion (%) of adult women:</i>					
i) with body mass index (BMI) below 18.5 kg/m ² 1998-99	44	19	29	37	36
ii) with anaemia	63	23	57	50	52
<i>% of adult population with BMI<18.5 kg/m² (rural), 2000-01 (NNMB):</i>					
Males	40.5	22.4	26.7	37.4	37.4**
Females	46.0	18.7	38.2	42.0	39.4**
<i>Poverty (Rural) HCR[@]</i>					
Early 1970s	73.2	59.2	57.4	48.4	57.4
1977-78	68.3	51.5	57.7	38.1	53.1
1983	63.1	39.0	54.0	26.5	45.6
1987-88	48.3 (57.2) ^a	29.1 (44.0)	45.8 (51.3)	20.9 (31.6)	39.1 (44.9)
1993-94 (1994)	41.8 (54.2) ^b	25.8 (34.0) ^b	32.5 (37.3) ^b	15.9 (28.0) ^b	37.3 (39.4) ^b
1995-96	(51.0) ^c	(30.0) ^c	(33.5) ^c	(21.0) ^c	(39.0) ^c
1999-2000	50.5	24.9	37.4	20.3	35.4
	31.7 (56.2) ^b	9.4 (26.5) ^b	20.0 (39.4) ^b	10.5 (25.5) ^b	26.8 (36.4) ^b
<i>Proportion (%) of population receiving subsidized foodgrains from public distribution system</i>					
1993-94	10	80	69	63	27
1999-2000 (rice)	18	69	76	63	33
% of 'asset-poor' families, 1992-93	44	15	33	39	40
Growth rate of real agricultural wages 1990-2000	1.6	7.9	6.7	1.3	2.5
Per cent of urban population					
1981	26.5	18.7	33.0	23.3	23.7
1991	27.5	26.4	34.2	26.9	25.7
2001	28.0	26.0	43.9	27.4	27.8

Poverty estimates are based on NSS data and Planning Commission Expert Group Methodology (PCM) (except for 1994 for which data source is NCAER). The figures in brackets are respective estimates by individual researchers. There are other estimates available by individual scholars with modifications of PCM. However so far as time trend is concerned, one particular method followed consistently can give a fairly reliable indication.

* rural and urban combined; ** pooled of estimates of 9 major states; ^a Tendulkar et al (1993); ^b Sundaram (2001); ^c Based on NCAER Human Development Survey 1994; # 1980-81 prices up to 1988-89 and 1993-94 prices during 1990s; [@] The poverty estimates based on

methodology suggested by Expert Group set up by Planning Commission in 1993. This Expert Group Method is considered as an improvement over PCM (Malhotra 1997).

Sources: Visaria (2003); EPW 29(21), May 14, 1994; Govt of India (GOI), *Economic Survey*, Ministry of Finance, various years; India 2004, *Observer Statistical Handbook* (New Delhi); GOI (2002), *The Indian Child: A Profile 2002*, (Delhi: Ministry of Human Resource Development); GOI, Year Book 1995-96: Family Welfare Programme in India, Ministry of Health and Family Welfare, various years; Drèze and Sen (2002); Radhakrishna and Ravi (2004); Nasurudeen and Mahesh (2005).

Table 3 Level and Progress of Social, Infrastructural and Human Development: West Bengal and Selected States

Indicator	West Bengal	Kerala	Tamil Nadu	Andhra Pradesh	India
Literacy/education					
Literacy rate [®] [rural] (7+)					
1981 (5+)	37.8[25.3]	77.6 [71.9]	43.6 [29.1]	26.5 [16.1]	34.0 [20.7]
1991	50.5[38.1]	88.9 [85.1]	54.6 [41.8]	35.7 [23.9]	44.7 [30.6]
2001	64.1[53.8]	90.1 [86.8]	66.7 [55.8]	55.3 [44.4]	59.2 [46.6]
% of women aged 15-44 years who are illiterate (Rural) 1991	60.8	8.6	58.7	78.5	69.7
% of female children aged 6-14 attending school					
1981#					
1992-93	38	83	34	21	29
1998-99	63	95	79	55	59
	77	97	78	71	74
% of females aged 15-19 who attained grade 5, 1992-93	51	93	67	47	51
Social Infrastructure					
% of rural households with electricity connection					
1981	21.9 [7.0]	28.9 [23.2]	37.2 [26.0]	21.4 [12.5]	25.7 [14.7]
1991	32.9 [17.8]	48.4 [42.0]	54.5 [44.5]	46.3 [37.5]	43.0 [30.5]
1998-9	37	72	79	74	60
% of villages electrified					
1986	53.9	100	99.9	87.0	67.8
1994	76.0	100	99.9	99.9	85.6
Consumption of food grains (per capita) obtained through public distribution system (rural) (kg/year), 1993-94	2.8	54.1	24.5	30.7	10.6
% of villages having telephone connections 1991	1.9	59	14	14	6
% of Rural Households that have ever made use of telephone 1998 (%)	17	81	37	29	29
% of villages having any					

post/telegraph facilities 1991	19	99	56	55	23
-----------------------------------	----	----	----	----	----

Continued Table 4.....					
Indicator	West Bengal	Kerala	Tamilnadu	Andhra Pradesh	India
% of villages having bus stand 1991	26	99	78	56	34
% of villages connected by pucca road 1991	25	99	76	51	37
Composite score out of 100 for villages having selected facilities 1991	20.7	89.1	66.6	57.5	40.3
% of villages with medical facilities:					
1981	13	96	23	23	14
1991	27	95	35	36	33
Share in Public Health Subsidies 1995-1996 (NSS)					
Poorest 20%	11.0	21.9	14.8	16.3	10.2
Richest 20%	28.8	19.7	19.9	26.7	31.0
% households having access to safe drinking water 1991 (rural)	84.1	71.2	67.7	57.4	63.6
% of recent births preceded by different maternal care 1992-93					
tetanus vaccine antenatal check-up	78 69	94 97	94 78	81 66	61 49
% of ever-married women aged 15-49 exposed to any media 1998-99	61	89	80	76	60
Voter turnout (%)					
1984	79	77	73	69	63
1989	80	79	67	70	62
1996	83	71	67	63	58
1999	75	70	58	69	60

females aged 10-14 years; [®] respective figures within [] brackets are for females.

Sources: Drèze and Sen (1995, 2002); National Institute of Rural Development, Rural Development Statistics, various years; Registrar General (1997), Availability of Infrastructural Facilities in Rural Areas of India: An analysis of Village Directory Data, New Delhi; Election Commission Reports (various issues); NCAER (2002)

Table 4 Composite Indices and Ranks in Economic and Social Infrastructure, and Human Development and Pace of Demographic Transition: West Bengal and Selected States, 1980-2001

Indicator	West Bengal	Kerala	Tamil Nadu	Andhra Pradesh
<u>Rank in terms of Composite Index of Economic Infrastructure</u>				
1980-81	11	4	2	6
1990-91	13	1	6	9
2000-01	10	2	4	7
<u>State Rank in terms of Composite Index of Social Infrastructure</u>				
1980-81	7	1	8	10
1990-91	12	1	11	8
2000-01	7	1	4	9
<u>Human Development Index [Rank]</u>				
1981	0.305 [8]	0.500 [1]	0.343 [7]	0.298 [9]
1991	0.404 [8]	0.591 [1]	0.466 [3]	0.377 [9]
2001	0.472 [8]	0.638 [1]	0.531 [3]	0.416 [10]
<u>Rural Human Poverty Index [Rank]</u>				
1981	56.1 [22]	34.2 [6]	49.2 [14]	56.2 [23]
1991	47.0 [23]	21.8 [2]	34.0 [13]	45.0 [19]
<u>Capability Poverty Measure (based on wasting), the 1990s [Rank]</u>				
	46.7 [12]	10.7 [1]	23.7 [2]	35.3 [4]
<u>Educational Index:</u>				
1991	0.37 [12]	0.79 [1]	0.58 [5]	0.49 [10]

1997 0.42 [15] 0.85 [1] 0.67 [8] 0.58 [13]

**Per cent Decline [Rank]
during 1981-92 in:**

IMR	25 [10]	58 [1]	36 [2]	20 [13]
TFR	27 [4]	41 [1]	35 [2]	26 [5]
CBR	21 [4]	32 [1]	27 [2]	22 [3]

Notes and Sources: 1) Ranking is made among 15 major states except for Human Poverty Index of which ranking is made among 32 states and Union Territories (Source: Human Development Report 2001, Planning Commission, p.142-143); 2) Economic Infrastructure: 16 indicators were included in the calculation of composite index for economic infrastructure (for details see Singh 2004, Table 1, p.39); 3) Social Infrastructure: 7 indicators were considered for calculation by Principal Component Method (for details, see Singh 2004, Table 1); 4) declines of IMR, CBR, and TFR and their rankings are based on SRS data (Govt. of India 1999). 5) Capability Poverty Measure is constructed by aggregating three indicators, namely a) % of children under five who are underweight (either on 'stunting' or 'wasting' concept); b) % of women aged 15 years and above who are illiterate; and c) % of births unattended by trained health personnel (see Dev and Ranade 1997); 6) Educational Index is based on two indicators, namely adult literacy and school enrolment of children in 6-14 years of age, with respectively two-third and one-third weights (Source: Ram and Mohanty 2003: Table 3.3, p.33).

Table 5 Summary information on broad socio-economic conditions for tribal and non-tribal population groups, West Bengal, early 1990s.

	Scheduled Castes	Scheduled Tribes	Other
<u>Population</u> (% to total), 1991	16,080,611 (23.6)	3,808,760 (5.6)	48,199,199 (70.8)
<u>Percent literate, 1991</u>	34	22	69
<u>School attendance rates (rural) among children 5-14 years, 1993-94</u>			
Male	68	47	71
Female	57	39	66
<u>Sex ratio (F/M), 1991</u>	931	964	901
<u>Per cent of households possessing land (acres): 1992</u>			
<u>irrigated</u>			
0	45	78	46
<1	26	11	26
1-2	22	8	19
<u>non-irrigated</u>			
0	28	13	26
<1	26	23	30
1-2	33	44	27
<u>Average time required to fetch water and back (minutes), 1992</u>	7.35	11.15	7.84
<u>Per cent using surface pond/lake for bathing and washing, 1992</u>	47	68	48
<u>Per cent having safe-drinking water, 1991</u>	80	56	85
<u>Per cent having none of the facilities (electricity, safe-drinking water and toilet), 1991</u>	16	39	9

Per cent using wood as cooking fuel, 1992	33	58	34
Average number of rooms in households, 1992	2.5	2.1	2.9
Per cent owning livestock, 1992	77	82	66
<u>Per cent owning (1992):</u>			
Radio	34	28	47
Clock/watch	44	28	62
Bicycle	45	33	56
% of villages having (1988-89):*			
fair price shop within the village		4.4 [25.5]	
primary health centre		13.7 [27.5]	
market/hat within 2 km		13.8 [40.2]	
primary school within 2 km		100.0 [97.0]	
Per cent living below the poverty line, (NCAER) 1994	56.0	72.0	48.0
Per cent living below the poverty line, (NSS) 1993-94	57.1	72.8	-
#Crude death rate (NCAER), 1994. {NSS,1984}	13.0{13.9}	9.0{15.9}	11.0{7.8}

Rural

* Based on NSS 44th Round of Survey, these figures under ST column refer to 'Tribal Majority Villages' and the figures within [] brackets refer to Non-Tribal Majority villages (see Govt of India 1994b:23-26).

Source: *National Family Health Survey, West Bengal 1992, Bombay*; Chakrabarty and Ghosh (2000); *Census of India 1991, Paper 2 of 1993: Housing and Amenities* (New Delhi); Govt of India (1994b); Govt. of India (1999); and Meenakshi (2000); Thangraj (1995)

Table 7 Use, Attitude, Knowledge, and Sources Relating to Family Panning, West Bengal 1992-93 [1998-99]

	Scheduled castes	Scheduled tribes	Other
Per cent of currently married women who:			
know any modern temporary method ^(a)	84 [99]	72 [99]	93 [99]
know source for any modern method ^(a)	63 [99]	54 [99]	79 [99]
ever used any contraceptive method ^(b)	66 [78]	55 [64]	72 [80]
are currently using any contraceptive method ^(c)	55 [68]	45 [53]	58 [67]
are sterilized ^(c)	36 [46]	34 [34]	29 [29]
are using modern temporary method	3 [8] (8)	2 [8] (8)	9 [16] (18)
are using traditional method	16 [14] (64)	9 [10] (39)	20 [22] (55)
have heard FP message through radio or television#	27 [36]	18 [27]	37 [41]
watch television or listen to radio at least once a week or visiting cinema at least once a month	55	39	64
find media messages on FP acceptable	80	80	85
approve FP and husband approves too##	69	63	71
approve FP but husband's attitude unknown##	6	11	4
Unmet need for contraception (%) ^d	25 [9.8]	28 [12.3]	23 [12.8]
<i>Unwanted TFR</i> as per cent of actual TFR (%) ^e	22	27	25

^(a) Includes pill, copper T/IUD, injections, condoms, female sterilization, and male sterilization.

^(b) Both modern and traditional methods. Traditional methods include periodic abstinence, withdrawal and others.

^(c) The married women whose husbands are sterilized are also included.

^(d) This is popularly known as 'unmet need for family planning' i.e. the proportion (%) of currently women who are either carrying an mistimed conception or are amenorrhoeic after an mistimed birth and, those who are not using any contraceptive method but who either want to wait 2 or more years for next birth or who do not want any further birth at all. Taken from NFHS West Bengal 1992, p.132.

^(e) *Unwanted TFR* is the difference between estimated TFR and *wanted TFR* (which is fertility rate that would have resulted if all unwanted births were prevented). Rates are calculated on births in the period between 1-36 months before the interview to women aged 15-49. Taken from NFHS West Bengal 1992, p.139.

per cent of ever-married women ; ## per cent non-sterilized currently married women who know of a contraceptive method; FP = Family Planning

Note: Figures in parentheses are respective proportions among eligible married women i.e. who are not pregnant (to their own knowledge) and who or their husbands are not sterilized. Figures in [] brackets are respective figures for 1998-99.

Source: Ramesh et. al (1996); *National Family Health Survey, West Bengal 1992* (Bombay), 7.4, 7.9. Author's calculations based on NFHS data.

APPENDIX: Table A1 Definition of Variables and respective state level averages, West Bengal

Name	Description	WB Mean
<u>Political Mobilisation/Participation</u>		
RA1	% of farmers who are members of WBKS 1991	34.66
RA4	% of farmers who are members of WBKS, 2001	34.64
RA2	% point increase of membership of WBKS between 1981 and 1991	18.49
RA3	% point change in the membership of WBKS between 1991 and 2001	-0.02
Dwa1	% total rural women aged 15-50 years, who are members of WBDWA, 1991	17.60
Cda1	% Point change in membership of WBDWA, 1981-1991	8.8
Cda2	% point change in membership of WBDWA between 1991 and 2001	5.10
Y1	%Votes cast for LF in 1991 assembly elections	
Y2	%Votes cast for LF in 1996 assembly elections	53.82
<u>Fertility, its Decline, and Contraceptive Prevalence</u>		
Z2	TFR 2001	2.6
Z3	% Decline in TFR in 1970-late 1980	11.8
Z4	% Decline in TFR in late 1980-2001	28.0
Z5	TFR 1974-1980	4.0
Z6	TFR 1984-1990	3.6
Z11	% of currently married women using any contraceptive method, 2000	35.4
CPR92	% of currently married women using any contraceptive method, 1992-93	57.4
<u>Growth of Agricultural Production, Rural Poverty and Its Reduction</u>		
Gth2	Weather-adjusted growth rate of agricultural production 1981-82 to 1990-91	
Pov72	Headcount ratio of rural poverty, 1972 (% below poverty line)	73
Pov93	Headcount ratio of rural poverty, 1993	41.8
Pov99	Head-count ratio of rural poverty, 1999-2000 (Deaton)	31.7
Cpov1	% point decline in rural poverty, 1972-1993	31.2
Cpov2	% point decline in rural poverty, 1993-2000	10.1
<u>Land/Tenancy Reforms</u>		
Brg92	Ratio of total number of <i>bargadars</i> registered up to 1991 to total rural households in 1991	16.15
Bnf92	Ratio of total no. of beneficiaries up to 1992 to total rural households in 1991	22.93

Ldst92 Ratio of land distributed till 1992 to net sown moving average area, 1982-87 80.87

Population Density and its Increase 1981-1991

Den1 Population density per sq km 1981 615.00
 Den2 Population density per sq km 1991 767.00
 Cden Change in population density between 1981 and 1991 (per sq km) 152.00

APPENDIX: Table A2 Correlation Matrix Among District-level Indicators of Fertility Decline/Control and Political Mobilization/participation, West Bengal 1980-2001

	CPR 92	Z2	Z3	Z4	Z5	Z6	Z11	Cda1	Y1	RA1	RA2	RA3	RA4	Dwa1	Cda2	Y2
CPR 92	-															
Z2	-0.52* [-0.51*]	-														
Z3	0.68** [0.58*]	-0.65** [-0.65**]	-													
Z4	0.29 [0.42]	-0.55* [-0.53*]	0.43 [0.44]	-												
Z5	-0.10 [-0.29]	0.63** [0.81**]	-0.06 [-0.19]	-0.44 [-0.19]	-											
Z6	-0.36 [-0.40]	0.97** [0.98**]	-0.62** [-0.63**]	-0.36 [-0.43]	0.60* [0.84**]	-										
Z11	-0.11 [-0.07]	-0.32 [-0.12]	0.09 [0.05]	-0.09 [-0.15]	0.30 [0.02]	-0.16 [0.00]	-									
Cda1	0.30 [0.40]	-0.64** [-0.74**]	0.47 [0.59*]	0.34 [0.32]	-0.42 [-0.70**]	-0.68** [-0.79**]	0.19 [0.10]	-								
Y1	-0.31 [-0.36]	0.04 [0.03]	-0.08 [0.05]	-0.31 [-0.32]	0.14 [0.01]	-0.00 [0.01]	0.57* [0.60*]	0.00 [-0.05]	-							
RA1	-0.02 [-0.09]	-0.23 [-0.10]	0.03 [0.15]	-0.05 [-0.12]	0.07 [-0.12]	-0.24 [-0.14]	0.58* [0.47]	0.42 [0.19]	0.68** [0.68**]	-						
RA2	-0.19 [-0.21]	-0.22 [-0.21]	-0.1 [0.07]	-0.17 [-0.12]	-0.24 [-0.26]	-0.27 [-0.25]	0.61* [0.63*]	0.35 [0.14]	0.77** [0.79**]	0.92** [0.87**]	-					
RA3	0.35 [0.55*]	-0.22 [-0.37]	-0.13 [0.37]	-0.09 [-0.06]	-0.07 [-0.33]	-0.28 [-0.39]	0.24* [0.44]	0.17 [0.28]	0.02 [0.16]	0.14 [0.21]	0.20 [0.29]	-				
RA4	0.25 [0.31]	-0.40 [-0.29]	0.09 [0.17]	-0.08 [-0.16]	0.02 [-0.24]	-0.33 [-0.19]	0.64** [0.59**]	0.44 [0.25]	0.55* [0.54*]	0.87** [0.82**]	0.84** [0.81**]	0.60* [0.60*]	-			
Dwa1	0.57* [0.45]	-0.51* [-0.57*]	0.43 [0.49]	0.22 [0.27]	-0.24 [-0.55*]	-0.52* [-0.60*]	-0.03 [-0.10]	0.87** [0.90**]	-0.10 [-0.05]	0.38 [0.40]	0.17 [0.15]	0.02 [0.15]	0.32 [0.25]	-		
Cda2	0.07 [0.12]	-0.41 [-0.37]	0.38 [0.31]	0.14 [0.08]	-0.33 [-0.44]	-0.45 [-0.43]	0.32 [0.26]	0.71** [0.78**]	-0.05 [0.03]	0.20 [0.11]	0.31 [0.21]	0.22 [0.19]	0.27 [0.14]	0.51* [0.57*]	-	

Y2	-0.02	-0.35	-0.13	-0.04	-0.19	-0.29	0.38	0.18	0.77**	0.07	0.26	-0.14	0.44	0.09	-0.14	-
	[-0.04]	[-0.28]	[-0.12]	[-0.07]	[-0.32]	[-0.20]	[0.34]	[0.10]	[0.79**]	[0.48*]	[0.22]	[-0.11]	[0.40]	[0.14]	[-0.06]	

* Significant at 0.05 percent level; ** Significant at 0.01 percent level.
 Figures in brackets [] are respective rank correlation coefficients

APPENDIX: Table A4 Correlation Matrix Among Indicators of Land Reforms, Rural Poverty, and Agricultural Growth, West Bengal 1980-2001

	Pov93	Cpov2	Cpov1	Cda1	RA1	Gth2	Bnf92	Brg92	Ldst92	CPR 92	Z3	Z6
Pov93	-											
Cpov2	0.92**	-										
	[1.00**]											
Cpov1	-0.81**	-0.55*	-									
	[-0.81*]	[-0.81**]										
Cda1	-0.57*	-0.75**	0.14	-								
	[-0.57*]	[-0.57*]	[0.34]									
RA1	-0.42	-0.42	0.40	0.42	-							
	[-0.38]	[-0.38]	[0.53*]	[0.19]								
Gth2	-0.55*	-0.32	0.80**	0.02	0.41	-						
	[-0.52*]	[-0.52*]	[0.74**]	[0.08]	[0.35]							
Bnf92	0.45	0.51*	-0.11	-0.23	0.03	-0.03	-					
	[0.53*]	[0.53*]	[-0.12]	[-0.38]	[-0.04]	[-0.17]						
Brg92	-0.03	0.03	0.13	-0.06	0.42	0.41	0.30	-				
	[-0.07]	[-0.07]	[0.15]	[-0.11]	[0.43]	[0.41]	[0.16]					
Ldst92	0.06	0.00	-0.25	-0.09	0.02	-0.08	-0.19	0.56*	-			
	[0.16]	[0.16]	[-0.39]	[-0.24]	[-0.06]	[-0.11]	[-0.16]	[0.52]				
CPR 92	0.04	-0.16	-0.37	0.30	-0.05	-0.25	0.31	0.31	0.24	-		
	[0.08]	[0.08]	[-0.18]	[0.40]	[-0.10]	[-0.07]	[-0.21]	[0.06]	[0.03]			
Z3	0.05	-0.15	-0.39	0.47	0.03	-0.16	-0.26	0.04	0.13	0.67**	-	
	[-0.01]	[-0.01]	[-0.23]	[0.59*]	[0.15]	[-0.09]	[-0.36]	[-0.03]	[0.04]	[0.71**]		
Z6	0.36	0.56*	0.01	-0.68**	-0.24	-0.04	0.39	-0.00	0.09	-0.61*	-0.62**	-
	[0.42]	[0.42]	[-0.22]	[-0.79**]	[-0.14]	[-0.18]	[0.50*]	[-0.01]	[0.12]	[-0.67**]	[0.63**]	

* Significant at 0.05 level. ** Significant at 0.01 level.
 The figures inside [] brackets are corresponding rank correlation coefficients.

APPENDIX: Table A3 Correlation Coefficient Matrix Among Indicators of Agricultural Growth, Rural Poverty, and Political Participation, West Bengal, 1980-2001

	Den2	Den1	Cden	Pov72	Pov93	Pov99	Cpov2	Cpov1	Dwa1	Cda1	RA1	Cda2	Z3	Z4	Y1	Y2	Z11	Gth2
Den2	-																	
Den1	0.99** [0.98**]	-																
Cden	0.98** [0.97**]	0.97** [0.93]	-															
Pov72	-0.51* [-0.42]	-0.51* [-0.37]	-0.50* [-0.48]	-														
Pov93	-0.55* [-0.41]	-0.55* [-0.41]	-0.53* [-0.48]	0.38 [0.51*]	-													
Pov99	0.37 [0.28]	0.38 [0.24]	0.34 [0.30]	-0.91** [-0.95**]	-0.39 [-.58*]	-												
Cpov2	-0.57* [-0.41]	-0.58* [-0.41]	-0.55* [-0.48]	0.66** [0.51*]	0.92** [1.00**]	-0.71** [-0.58*]	-											
Cpov1	0.25 [0.01]	0.26 [0.04]	0.24 [0.03]	0.23 [-0.03]	-0.81** [-0.81**]	-0.16 [0.25]	-0.55* [-0.81**]	-										
Dwa1	0.66** [0.50*]	0.66** [0.46]	0.65** [0.43]	-0.66** [-0.68**]	-0.63** [-0.65**]	0.70** [0.74**]	-0.77** [-0.65**]	0.24 [0.45]	-									
Cda1	0.39 [0.25]	0.39 [0.21]	0.36 [0.25]	-0.72** [-0.77**]	-0.57* [-0.57*]	0.76** [0.85**]	-0.75** [-0.57*]	0.14 [0.34]	0.87** [0.90**]	-								
RA1	-0.10 [0.13]	-0.08 [0.18]	-0.04 [0.05]	-0.07 [-0.01]	-0.42 [-0.38]	0.21 [0.12]	-0.42 [-0.38]	0.40 [0.53*]	0.38 [0.40]	0.42 [0.19]	-							
Cda2	-0.37 [-0.11]	-0.03 [-0.16]	-0.05 [-0.11]	-0.63* [-0.60*]	-0.04 [-0.21]	0.71** [0.69**]	-0.31 [-0.21]	-0.34 [0.09]	0.51* [0.57*]	0.71** [0.78**]	0.20 [0.11]	-						
Z3	0.42 [0.52*]	0.41 [0.48]	0.42 [0.47]	-0.55* [-0.54*]	0.05 [-0.01]	0.47 [0.51*]	-0.15 [-0.01]	-0.39 [-0.23]	0.43 [0.49]	0.47 [0.59*]	0.03 [0.15]	0.38 [0.31]	-					
Z4	0.15 [0.33]	0.14 [0.27]	0.16 [0.41]	-0.33 [-0.30]	-0.16 [-0.17]	0.19 [0.20]	-0.20 [-0.17]	-0.03 [-0.09]	0.22 [0.27]	0.34 [0.32]	-0.05 [-0.12]	0.14 [0.08]	0.43 [0.44]	-				
Y1	-0.36 [-0.15]	-0.34 [-0.07]	-0.42 [-0.27]	0.09 [0.09]	-0.02 [-0.07]	0.05 [0.04]	-0.04 [-0.00]	0.08 [0.20]	-0.10 [-0.05]	0.00 [-0.05]	0.68** [0.68**]	-0.05 [0.03]	-0.08 [0.05]	-0.31 [-0.32]	-			

Y2	-0.08	-0.07	-0.13	0.03	-0.38	0.13	-0.35	0.42	0.08	0.18	0.64**	-0.14	-0.14	-0.04	0.77**	-	
	[-0.13]	[-0.06]	[-0.13]	[-0.06]	[-0.39]	[0.18]	[-0.39]	[0.51]	[0.07]	[0.10]	[0.58*]	[-0.07]	[-0.11]	[-0.04]	[0.79**]		
Z11	-0.33	-0.31	-0.41	0.14	0.33	0.01	0.25	-0.26	-0.03	0.19	0.58*	0.32	0.09	-0.09	0.57*	0.38	-
	[-0.36]	[-0.29]	[-0.27]	[0.19]	[0.27]	[-0.10]	[0.27]	[-0.01]	[-0.10]	[0.10]	[0.47]	[0.26]	[0.05]	[-0.15]	[0.60*]	[0.34]	
Gth2	0.23	0.24	0.18	0.34	-0.55*	-0.24	-0.32	0.80**	0.18	0.02	0.41	-0.27	-0.16	-0.14	0.14	0.33	-0.04
	[0.04]	[0.12]	[0.02]	[0.20]	[-0.52*]	[-0.06]	[-0.52*]	[0.74**]	[0.16]	[0.08]	[0.35]	[-0.23]	[-0.09]	[-0.11]	[0.17]	[0.40]	[0.06]

* Significant at 0.05 percent level; ** Significant at 0.01 percent level.

Figures in brackets [] are respective rank correlation coefficients

Table 6 Differentials in Fertility and Its Change Between SC, ST and Other Groups, West Bengal, Post-Independence Period

Population Group	TMFR 1971 ⁽¹⁾	TFR 1981 ⁽²⁾ (TMFR)	TFR, 1990-1992 ⁽³⁾	TFR, 1997-99	Mean number of children ever born to women aged 40-49 years ⁽⁴⁾ ,			Per cent change in period fertility rate			Percent change in <i>completed</i> fertility between women who started reproductive career in the		
					1981	1992	1997-99	1971-1981	1981-1990/92	1990-92-1997-99	late 1940s and those in the late 1950s ⁽⁵⁾	late 1960s and those in the earlier 1970s ⁽⁶⁾	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Scheduled Castes	7.1	4.40 (4.72)	3.52	2.34	5.11	5.73	4.67	- 34	- 20	-33	+ 12	-18	
Scheduled Tribes	6.4	3.83 (4.32)	3.05	2.31	4.24	4.48	4.25	- 33	- 20	-24	+7	-5	
Other	7.6 [#]	4.32 [#] (5.1)	2.85	2.21	5.30	4.64	4.11	- 33	- 34	-22	-12	-11	

⁽¹⁾ Calculated from data provided in *Census of India 1971, Series-22, West Bengal, Part II-C(ii), Social and Cultural Tables and Fertility Tables*, which were collected on the basis of 10 per cent sample of enumerated *rural* population in 1971.

⁽²⁾ Calculated from data provided in *Census of India 1981, Series 23, West Bengal, Part VI-A&B, Fertility Tables*, which were collected from a sample of 20 percent of census enumerated *rural* population in 1981;

⁽³⁾ National Family Health Survey, West Bengal 1992, (Bombay), Table 5.2, p. 69.

⁽⁴⁾ Calculated from data provided in *Census of India 1981, Series 23, West Bengal, Part VI-A&B, Fertility Tables*, which were collected from a sample of 20 percent of census enumerated *rural* population in 1992 : NFHS - I; 1998-99 : NFHS - II

⁽⁵⁾ Fertility change is gauged here as per cent difference in mean number of children ever born to ever married women aged 40-49 between 1981 to 1990-92 i.e. [col (6) - (5)]*100/col (5)

[#] For total population.

⁽⁶⁾ Fertility change is gauged here as per cent difference in mean number of children ever born to ever married women aged 40-49 between 1990-92 to 1997-99 i.e. [col (5) - (4)]*100/col (4)

[#] For total population.

Table 8(a) Composition of Inter-State Male Out-Migrants Among Four Streams, selected Indian states, 1981-1991

	Rural-Rural		Rural-Urban		Urban-Rural		Urban-Urban		Index of Male Urban-Urban Exodus#	
	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991
WB	23	19	23 [L]	25 [L]	11	9	44 [H]	47 [H]	1.66	1.71
Kerala	14	12	41	37	7	7	39	43	2.08	1.60
TN	22	18	27	27	12	13	39	42	1.18	1.22
Bihar	26	24	53	52	4	4	18	19	1.36	1.44
Orissa	31	29	47	47	4	4	17	19	1.44	1.42
UP	12	12	59 [H]	58[H]	3 [L]	3 [L]	26	27	1.44	1.36
India	21	19	43	43	6	6	30	32	1.29	1.24

Table 8(b) Composition of Inter-State Male Lifetime In-Migrants Among Four Streams, selected Indian states, 1981-1991

	Rural-Rural		Rural-Urban		Urban-Rural		Urban-Urban		Index of Male Urban-Urban Influx##	
	1981	1991	1981	1991	1981	1991	1981	1991	1981	1991
WB	19	17	58 [H]	59 [H]	3 [L]	3 [L]	21	22 [L]*	0.79	0.80
Kerala	45	33	13	13	26	30	17 [L]	25	0.90	0.95
TN	11 [L]	11	28	29	10	10	52 [H]	52 [H]	1.57	1.52
Bihar	25	22	42	49	7	5	27	25	2.16	1.9
Orissa	36	32	37	37	7	7	21	25	1.78	1.86
UP	34	34	24	27	9	8	32	31	1.78	1.57
India	21	19	43	44	6	6	31	32	1.33	1.24

* This ranking is exclusive of North-Eastern States and Himachal Pradesh.

[H] and [L] indicate respectively the highest and lowest figures among all the major states of India.

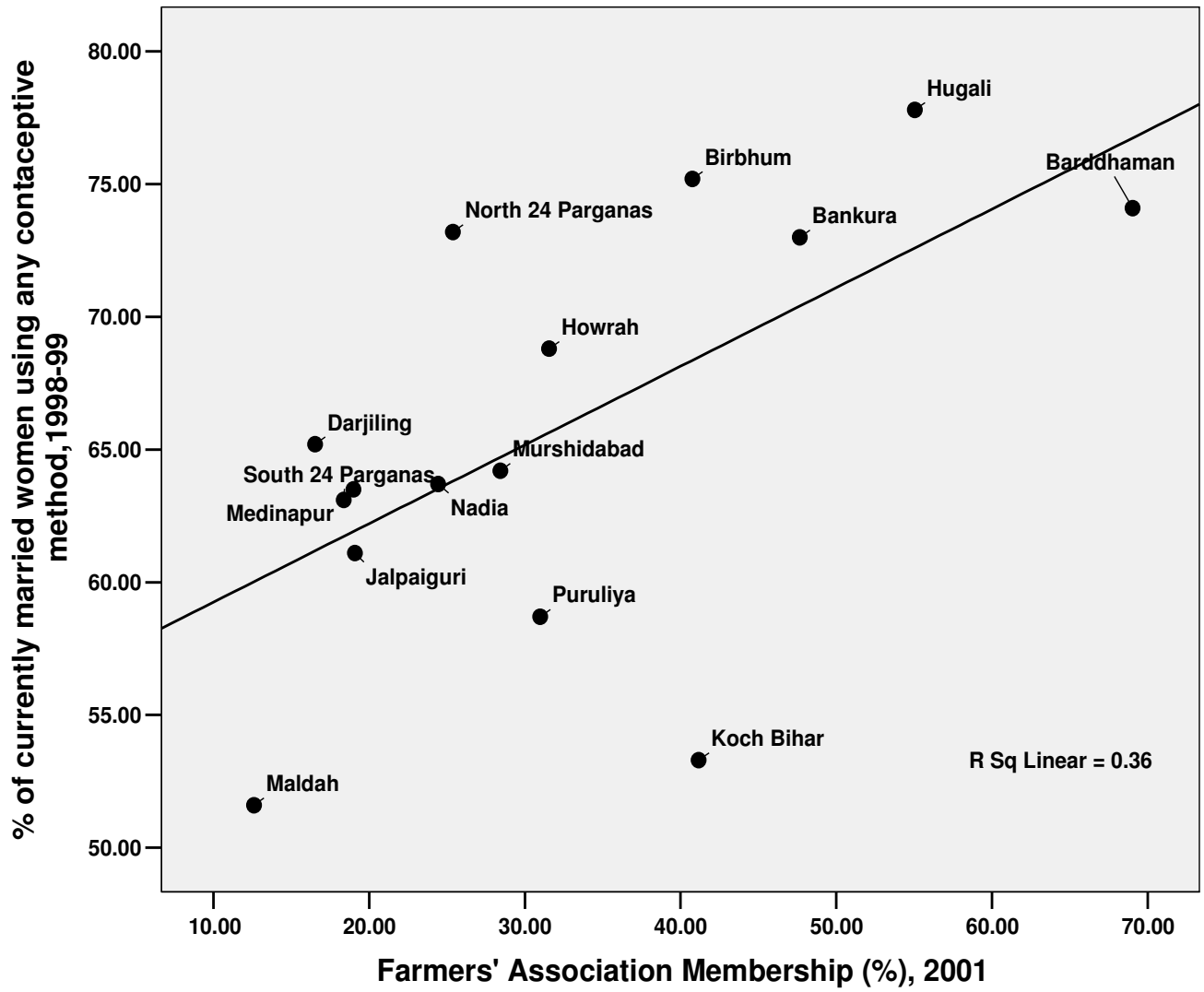
Ratio of the proportion of urban-urban stream in total male inter-state out-migration to proportion of urban population

Ratio of the proportion of urban-urban stream in total male inter-state in-migration to the proportion of urban population

Source: For 1981 out-migration, Sebastian 1992: Table 3; all other figures are author's own calculation from respective census volumes.

Original sources: Census of India 1981, Series I, India, Part V, A&B(i), Migration Table D-1; and Census of India 1991, Series I, India, Part V-D Series, Migration Tables, Vol.1, Table D1.

Appendix: Figure A2



Appendix: Figure A1

