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***The irrelevance of national strategies?
Rural poverty creation and reduction in states
and regions of India***

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Abstract

Examining panel data for more than 13,000 rural Indian households over the 12-year period 1993-94 – 2004-05 confirms on a large scale what grassroots studies have identified before: two parallel and opposite flows regularly reconfigure the national stock of poverty. Some formerly poor people have escaped poverty; concurrently, some formerly non-poor people have fallen into the pool of poverty. These inward and outward flows are asymmetric in terms of reasons. One set of reasons is associated with the flow into poverty, but a different set of reasons has helped raise households out of poverty. Both sets of reasons vary considerably across and within states. Not a single factor matters consistently across all states of India. Any standardised national policy is thus largely irrelevant. Diverse threats operate and different opportunities exist that must be identified and tackled at the sub-national level.

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Keywords: Empirical studies of poverty dynamics, pro-poor growth and poverty reduction

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'Poverty' is nothing more than the sum of all poor people in a country or region. It increases whenever people fall into poverty, and it decreases when people escape poverty. Because some people fall into poverty even as other people move out of poverty, the stock of poverty in a country is simultaneously both created and reduced. This fluidity is an essential feature of poverty dynamics. Explaining the net change in the stock of poverty over any period requires understanding the separate flows that make and unmake poverty in parallel.

Any given rate of change in the stock of poverty can come about in a number of different ways. For instance, a net reduction of three percent over five years will be achieved if four percent of the population escapes poverty and one percent concurrently falls into poverty. But the same net reduction will also be achieved if 14 percent of the population escapes poverty and 11 percent falls into poverty. Taking note only of the net change (three percent in this case) is thus like observing the proverbial tip of the iceberg: it gives little idea of the trends that underlie the observed result.

With rare exceptions, analyses of poverty in India and other developing countries have not attended to the flows that simultaneously make and unmake poverty.¹ Instead, large-scale studies of poverty in India have usually examined the aggregate effects of national policies and state-level trends. A great deal of useful knowledge has been gained from these attempts to explain the net change in poverty at the national and state levels. For instance, it has been learned how growth in agricultural productivity, improvements in infrastructure, the rate of inflation, and different starting conditions (including historical literacy trends, health care conditions, and irrigation coverage) help explain part of the difference in aggregate poverty across Indian states.² Such examinations do not, however, help understand how poverty is simultaneously both created and reduced. Why does a higher rate of growth of agricultural productivity or better infrastructure in some state translate simultaneously into escape from poverty for one set of households and a descent into poverty for another set of households? Why does poverty continue being created even when the rate of economic growth is high?

In order to understand these differences better – to learn how poverty is created and how it is overcome in practice – it is essential to examine poverty flows directly at the level where these are experienced. Three steps need to be followed in order. First, households must be identified who escaped from poverty (or fell into poverty). Second, the experiences of such households should be compared with those of others who

¹ Some smaller-scale studies have examined these trends in the past. See, for example, Attwood (1979); Djurfeldt, et al. (2008); Jodha (1988); Wadley (1994); and Walker and Ryan (1990). More recently, a few larger-scale examinations, examined below, have also probed poverty flows. In the context of other developing countries, see, for example, Baulch and Hoddinott (2000) and Krishna (2010).

² See, for example, Datt and Ravallion (1996, 1998, 2002); Mehta and Shah (2003); Ravallion and Datt (1996); Saith (1981); and Shariff (2009).

remained poor (or stayed out of poverty). Third, factors common to particular household experiences need to be identified. What factors are common to the experience of households who escaped poverty and not commonly associated with households who have remained poor? What other factors were experienced by households who fell into poverty and not experienced by households who remained non-poor? Identifying these factors gives a better idea of the reasons responsible for escape and descent, which, in turn, helps formulate more effective anti-poverty policies.

Grassroots investigations conducted in different parts of three Indian states have shed new light upon the nature of factors associated, respectively, with escaping poverty and falling into poverty.³ We complement and extend this analysis with the help of a nationally representative panel data set of rural households. Examined over the period from 1993-94 to 2004-05, when high-speed economic growth was being experienced in India, this data set contains information for 13,593 households randomly selected in rural areas of 16 Indian states that together constitute more than 90 percent of the Indian population.

Four main conclusions follow from this examination:

- (1) Large numbers of people have fallen into poverty over this 12-year period, even as many others have moved out of poverty. The effects of national economic growth were experienced very differently by people in rural India, with some among them experiencing considerable improvements in household income and others simultaneously becoming poorer than before. Overall, rural poverty has increased among the states examined, but there is considerable variation across states and among regions within states.
- (2) Rural poverty has fallen in states (such as Himachal Pradesh, Kerala, Rajasthan and West Bengal) where more people moved out of poverty than fell into poverty. Conversely, rural poverty has increased over the same period in Andhra Pradesh, Bihar, Gujarat, Haryana, Maharashtra, Madhya Pradesh, Orissa, Tamil Nadu and Uttar Pradesh. The latter group of states includes some where per capita state domestic product increased at lower-than-average rates (Bihar, Uttar Pradesh, Orissa), but it also includes some others that experienced high rates of economic growth during the 1990s (Gujarat, Maharashtra, Tamil Nadu).⁴ Thus, when examined at the level of states (and regions within states), the correlation between economic growth and poverty reduction is far from perfect.

³ These examinations were conducted in diverse parts of Rajasthan, Gujarat and Andhra Pradesh. See Krishna (2003, 2004, 2006); Krishna, et al. (2005); and Krishna and Lecy (2008). Krishna (2010) brings these results together while also introducing results from similar investigations in Kenya, Uganda, Peru and North Carolina, USA. See also Narayan, et al. (2009), which draws its methods of inquiry from these earlier studies and reproduces very similar results.

⁴ Estimates for growth rates of state domestic product were obtained from Ahluwalia (2000) and K. L. Krishna (2004).

- (3) Analysing the aggregate data (for all states) helps identify factors commonly associated, respectively, with escaping poverty and falling into poverty. While some factors – such as women’s media exposure, remittances and the prevalence of telephones – are significantly associated with both escapes and descents, there is also another set of factors that matter only for escapes or only for descents. For instance, location within five kilometres of a town and the presence of an adult son in the household (in 1993) were found to be significantly associated with escapes, but not with descents. Conversely, education of the household head to secondary level or higher, ownership of land and other rural assets, and engagement in rural social networks helped reduce the risk of descent into poverty – but these factors had no significant impact upon households’ prospects for escaping poverty. These differences in underlying reasons suggest that a single national policy will not suffice to reduce poverty effectively. Different policies are required for dealing with each of the two constitutive poverty flows.
- (4) Further differences were revealed when both poverty flows (escape and descent) were analysed at the level of individual states. Reasons for escape and descent vary considerably across state boundaries. The factors that made a significant difference for escape (or descent) within one Indian state mattered little or not at all within other states and regions.

Thus, designing standard national policies to combat poverty hardly represents the best use of available resources. Poverty can be reduced faster and more cost-effectively if attention is paid to diverse factors variously associated with escapes and descents in different states and regions. Better policies can be designed after context-specific reasons for escape and descent have been identified. Careful, grassroots-level longitudinal investigations are an essential precursor to effective policy design.

Data and methods

Three caveats are in order before data in support of these arguments are presented. First, these data, derived from nationally-representative sample surveys carried out by the National Council for Applied Economic Research (NCAER) deduce estimates of poverty based on calculations of household income.⁵ Our estimate for rural poverty in any state is not directly comparable, therefore, with other and more widely-used estimates derived from consumption data provided by the National Sample Survey Organization (NSSO). However, the aggregate figures that we have calculated using NCAER’s income data do fall within the range of figures derived by different analysts using diverse methodologies and adjustment techniques to calibrate the NSSO data.

⁵ These household income estimates were compared against state-specific income poverty lines for rural areas calculated by the Indian Planning Commission for 1993-94 and separately for 2004-05.

Second, because we have data for only two points in time, respectively, 1993-94 and 2004-05, we lack information about several important events that households experienced during the intervening period. That such household-level events and processes can make critical impacts on households' prospects for escaping poverty (as well as for their chances of falling into poverty) has been well documented by the grassroots investigations referred to above. To some small extent, household events were captured in the NCAER data sets. For instance, the survey administered in 2004-05 inquired about loans taken by each household in the previous five years and about deaths and major illnesses occurring during the 12 months preceding the survey. However, the majority of household-level events continue to remain unknown. The vast scope and coverage of the NCAER data set – in terms both of geographic reach and numbers of household and community characteristics examined – has to be complemented, thus, by additional sources of data that probe household event histories in greater depth and detail. We conducted such combined quantitative-and-qualitative examination using data from grassroots investigations previously undertaken by one of us. However, the scope of this analysis is restricted, because the extent of geographic overlap between the NCAER data and the grassroots studies is small. Because such combined analyses can add greatly to the richness and robustness of the results,⁶ we urge that they be taken up in future studies of poverty in India.

Third, while we wish to highlight the need for decentralised and disaggregated analysis, it must be noted that the number of observations became progressively smaller as we went from state to region to sub-region and as we separated descents from escapes. With the data at hand, we could meaningfully analyse differences in reasons for escape and descent at the level of an entire state, and we were able to categorise regions within states in terms of their relative rates of escape and descent. Additional data are required, however, for probing the natures of reasons associated with escapes and descents at the sub-state level. We hope that others will take up where we have left off, assembling and analysing these new data sets.

With these caveats behind us, we can begin to describe the data and the results that were obtained. Two waves of sample surveys representative of rural areas in 16 major states constitute the data base for our analysis. About one half of the 33,230 households surveyed in 1993-94 were selected at random for resurvey in 2004-05. It was possible to contact 13,593 households (located in 195 districts and 1,765 villages), resulting in a relatively high re-contact rate of 82 percent. The panel consists of 11,153 original

⁶ For more on combined quantitative-and-qualitative, or Q2, analyses, see Kanbur (2003). For an example of this type of analysis undertaken in one part of India, see Krishna and Lecy (2008).

households, along with 2,440 households who split from the originally surveyed households.⁷

These multi-dimensional surveys encompass a wide range of human development and poverty-related issues. Both surveys were undertaken by NCAER, a well-known applied economics research institution in India.⁸ Two survey instruments were administered to each household by a mixed-gender team of investigators. A household questionnaire was administered to the individual most knowledgeable about income and expenditures in each household, most frequently the male head of household. Separately, a questionnaire related specifically to health- and education-related items was administered to an adult woman of each surveyed household. Interviews typically took between 45 and 90 minutes. Survey instruments were translated into 11 Indian languages, and field work was undertaken by 25 agencies in diverse parts of India. Different household occupations were identified, so as to assess and estimate incomes from multiple sources. All variables employed in this analysis are briefly described in Appendix 1.

Poverty dynamics: escapes and descents

Table 1 shows the results for separate states in terms of trends in the rural headcount ratio of income poverty. Overall, these data show that 18 percent of rural households moved out of poverty over this period, but at the same time another 22 percent of households fell into poverty. Thus, the stock of rural poverty, measured in terms of household income, grew by four percent over this 12-year period. A total of 36.1 percent of rural households were poor in 1993-94, and as many as 40 percent were poor in 2004-05.⁹

⁷ This panel formed part of a larger survey conducted in 2004-05, within which a total of 27,010 rural and 14,544 urban households were surveyed. Split households who were no longer living in the same village could unfortunately not be resurveyed in 2004-05. Also, about 0.1 percent of all panel households who reported an unbelievably low level of income (less than Rs. 1,000) were deliberately excluded from the analysis.

⁸ A number of influential publications have utilised data from one or the other of these two surveys. See, for example, Desai, et al. (2010); Muller and Shariff (2009); Shariff (2009); and Shariff and Krishnaraj (2007). The latter survey was completed in collaboration with the University of Maryland and funded through a series of grants from the National Institute of Health and Human Development, USA. Additional funds were provided by the World Bank.

⁹ It is possible that if we were to look at similar results for years before or after the terminal year, 2004-05, a different conclusion might emerge regarding the aggregate rural poverty rate. As noted below, calculating the precise poverty ratio at any point of time is a matter of judgement, thus a zone of controversy. More germane for policy purposes is an accounting of trends and the associated reasons.

Table 1: Trends in rural headcount poverty: 1993-94 to 2004-05

	Sample size (per-cent)	Rural headcount poverty (percent)					
		Became non-poor	Stayed non-poor	Stayed poor	Became poor	Poor in 1993-94	Poor in 2004-05
All India	13,459	18.2	41.8	17.9	22.1	36.1	40.0
Andhra Pradesh	5.8	13.7	58.7	3.8	23.7	17.6	27.6
Bihar	6.5	19.4	31.4	21.5	27.7	40.9	49.1
Gujarat	5.2	17.6	41.5	18.2	22.6	35.8	40.8
Haryana	6.5	14.8	56.0	11.0	18.2	25.8	29.2
Himachal Pradesh	5.4	24.3	52.4	14.1	9.1	38.5	23.2
Karnataka	5.6	24.2	41.7	12.2	21.9	36.4	34.1
Kerala	2.2	29.3	51.5	6.4	12.8	35.7	19.2
Maharashtra	10.4	11.9	51.8	11.6	24.7	23.5	36.3
MP (incl. Chattisgarh)	14.8	14.6	35.6	19.8	30.0	34.5	49.8
Orissa	6.9	13.9	22.7	38.1	25.2	52.0	63.3
Punjab	5.3	18.2	54.9	11.6	15.3	29.8	26.9
Rajasthan	8.1	22.4	39.2	21.1	17.3	43.5	38.4
Tamil Nadu	4.2	17.9	47.1	12.1	22.9	30.0	35.0
UP (incl. Uttaranchal)	5.4	19.8	32.5	23.8	24.0	43.5	47.8
West Bengal & NE	7.5	26.1	28.9	28.2	16.9	54.2	45.1
Socio-religious group							
Higher-caste Hindus	20.4	14.7	57.8	10.0	17.5	24.7	27.5
SCs & STs	33.9	20.6	31.5	24.2	23.7	44.8	47.9
OBCs	34.8	17.4	42.8	15.7	24.0	33.1	39.8
Muslims	8.1	20.3	33.4	25.2	21.1	45.6	46.3
All others	2.7	18.2	63.1	4.9	13.8	23.0	18.7
Occupational group							
Cultivators	37.8	13.8	44.7	16.1	25.3	30.0	41.4
Agricultural labour	21.0	20.1	29.4	24.7	25.8	44.8	50.5
Non-farm manual work	15.8	23.5	27.7	26.0	22.8	49.5	48.8
Non-farm self-employment	9.8	22.1	49.4	12.3	16.3	34.4	28.5
Salaried	10.6	19.8	66.1	6.2	7.9	26.0	14.1
Remittances, pensions, etc.	4.9	15.2	50.6	13.0	21.2	28.2	34.1
Education (household head)							
Illiterate	73.0	18.7	38.8	19.5	22.9	38.3	42.5
Primary	22.9	17.2	48.3	14.4	20.1	31.6	34.5
Secondary	4.1	14.5	59.7	8.7	17.2	23.1	25.9
Household head age (years)							
<30	6.1	20.4	33.6	23.3	22.6	43.8	45.9
30-40	20.5	14.7	37.4	20.0	27.9	34.7	47.9
40 & above	73.4	19.0	43.7	16.9	20.4	35.9	37.3

These numbers, especially those for 2004-05, are at variance with the official statistics, which report a considerably lower rural poverty rate (28 percent) in 2004-05.¹⁰ To some extent, these differences are to be expected: we rely upon household income, while the official statistics derive poverty estimates using consumption data; and we consider only 16 states, while the official statistics refer to the entire country. But it is worth noting that a great deal of controversy has been generated by the official consumption-based statistics, and independent analysts have advanced a series of plausible reasons for why the official poverty estimates for 2004-05 (and for 1999-2000) should be adjusted upward.¹¹ One important set of adjustments has been proposed on account of changing consumption patterns. While official poverty estimates continue to be based on a bundle of goods and services originally selected in 1973, actual consumption patterns have changed substantially since that time, in particular, health and education expenditures have increased manifold. Making adjustments that take account of households' increased expenditures on education and health care, Dev and Ravi (2008) report a rural poverty ratio of 36.4 percent for 2004-05, which is considerably higher than the official figure of 28 percent and closer to our income-based estimate of 40 percent. An expert group established by the national Planning Commission also re-estimated poverty for both rural and urban areas after revising the consumption basket. According to this committee's calculations, the stock of rural poverty in 2004-05 stood at 41.8 percent, i.e., almost two percentage points *higher* than the estimates derived by us (GOI 2009b). Other indications also point towards slow or no improvement in wellbeing in rural areas of India over the decade under consideration.¹² On the other hand, a separate set of

¹⁰ See GOI (2009a), which reports two sets of All-India poverty ratios for 2004-05, respectively, 28 percent and 21 percent, which emerge from utilising different recall periods in household surveys.

¹¹ One important source of the controversy surrounds the methodological innovations introduced by 55th round of the NSS conducted in 1999-2000. Instead of asking respondents to recall the amounts of different goods and services that they had consumed during the 30-day period preceding the survey, as was done by previous NSS rounds, the 55th round used a seven-day recall period for items of daily use (such as food and tobacco) combined with a 365-day recall period for items purchased less frequently (such as consumer durables, clothing and education expenses). According to several observers, these methodological adjustments artificially lowered the official poverty rate for 1999-2000. See, for example, Deaton and Dreze (2002); Sen and Himanshu (2004); and the review of studies presented by Deaton and Kozel (2005). Other disagreements with poverty estimates based on the (uncorrected) NSS consumption data have arisen on account of the specific bundle of goods and services considered by these surveys. These quantities, selected originally in 1973, have remained unchanged in later surveys, thus 'present-day poverty estimates are based on a 30-year old consumption pattern even though the pattern itself has changed' (Patnaik 2004). Changes in relative prices over the years have further stoked the controversy about official poverty rates. Corrections suggested on account of these and other factors have usually resulted in raising the official poverty rates reported for 1999-2000 and 2004-05. See, for example, Deaton and Tarozzi (2005); Dev and Ravi (2008); Manna (2007); Palmer-Jones and Sen (2001); Saith (2005); and Sundaram and Tendulkar (2003a).

¹² For instance, average calorie consumption and average protein intake were lower in 2005 than in 1983, and there was virtually no change in the proportion of underweight children between 1998-99 and 2005-06 (Deaton and Dreze 2009: 62-63).

calculations, based on national income accounts, provides estimates of poverty that are lower than the official poverty rate, showing that rural poverty could have fallen in the aggregate during the period under review.¹³

Our income-based poverty statistics can thus be seen figuratively as the third pole of an ongoing debate. While they may not be measuring the same 'poverty' that consumption-based official statistics have measured, these estimates provide an additional perspective on the thorny issue of wellbeing in rural areas in the wake of rapid economic growth.

In order that these household income estimates could be viewed with greater confidence, we matched them against several other indicators of wellbeing in rural areas (Table 2).

Table 2: correlates of wellbeing

	Became non-poor	Stayed poor	Stayed non-poor	Became poor
Monthly per capita income (Rs.)	717	217	981	221
Share of food expenditure (percent of income)	49.8	122.9	42.2	132.1
Average landholding (in acres)	2.9	1.8	4.3	2.7
Productive assets (percent of households owning productive asset)	31.0	15.7	42.0	25.2
Utility assets (percent of households owning productive asset)	12.3	3.1	28.3	7.5
School-going children (percent of all children aged 6-14 years)	82.7	78.8	89.3	80.3
Debt (percent of households in debt)	44.9	53.1	46.0	55.2

These results showed that households who have remained poor or fallen into poverty had much lower monthly per capita incomes in 2004-05 (respectively, Rs. 217 and Rs. 221) compared to others who have moved out of poverty or remained non-poor (Rs. 717 and Rs. 981, respectively). Other indicators of wellbeing also clearly differentiated among these categories of households. The share of food expenditure in the household budget is much higher for households who fell into poverty or who remained poor; their average landholdings are much smaller than those of households who escaped poverty or remained non-poor; assets of different kinds are owned in much larger numbers by

¹³ See Bhalla (2002), but see also Sundaram and Tendulkar (2003b).

non-poor households;¹⁴ fewer children from poor households attend schools; and larger proportions of these households are in debt compared to non-poor households. The existence of a close relationship between these different indicators shows that calculations of household wellbeing based on monthly incomes are, in fact, assessing real changes in households' economic conditions over time.

Our purpose in this paper is not to defend some particular way of measuring poverty. We agree with Blank (2008: 243, 252) who, in another context, has suggested that since 'there is no "right" way to develop poverty thresholds', analysts should focus more closely on 'progress (or regression) over time, and this may be more important than the precise level of poverty at any point in time.'

In fact, investigating changes in households' conditions over time may be the only way to learn about the reasons that simultaneously make and un-make poverty, thereby helping develop the most suitable policy interventions. Unfortunately, a great deal of poverty analysis in the Indian context has tended

to focus heavily, if not exclusively, on the definition of the poverty line and estimating poverty incidence and its trends. Factors underlying regional and temporal variations in these respects...have also been explored but not to the extent one would expect (Vaidyanathan 2001).

Some prior examinations based on panel data sets have explored the temporal trends, but limitations deriving from sample size and the range of variables considered have circumscribed the scope of these inquiries and prevented the examination of state and regional effects.¹⁵ More in-depth analysis is facilitated by the larger and more

¹⁴ Tellingly, the average number of productive assets (such as hoes, ploughs and other agricultural implements) remained virtually static for all categories of households between 1993 and 2005. Over the same period, the average number of utility assets (such as bicycle, motor cycle/scooter, car, radio/transistor, television, VCR/VCP, air cooler) increased by roughly 50 percent across all rural households, with relatively higher increases (70 percent) being experienced by non-poor households and relatively lower increases (40 percent) among poor households. These data suggest that rural households are not finding it worth their while to invest further in agricultural assets. A likely explanation for such behaviours emerges below, when we consider the natures of reasons associated, respectively, with escapes from and descents into poverty.

¹⁵ The best-known among these examinations draw upon data collected by ICRISAT for 240 households in six Andhra Pradesh villages (Walker and Ryan 1990). Other analysts have drawn upon NCAER panel data sets for previous years. For instance, Gaiha (1989) examines a panel of 4,111 rural households for whom data were collected by NCAER for three survey years between 1968 and 1971. Using an income-based criterion for identifying poor households, he focuses on comparing the characteristics of households who were poor in all three years with those of other households. Reasons for escaping poverty or falling into poverty are not separately investigated, and regional differences are examined only in relation to villages that did or did not face adverse weather conditions. Gaiha and Kulkarni (1998) use another ICRISAT panel data set for two Maharashtra villages studied in 1979 and 1984 to identify a set of 'hardcore' poor who have not,

comprehensive panel data that we utilise. Some remaining limitations, noted above, stand in the way of a more fine-grained examination. Still, a great deal can be learned that is important for understanding poverty flows and for designing policies appropriate for particular contexts.

For example, the data presented in Table 1 show that every rural occupational group that derived its principal source of income from agriculture experienced more descents into than escapes from poverty. Cultivators, accounting for almost 38 percent of the sample, experienced the largest increase in the stock of poverty. Only 13.8 percent of cultivators escaped poverty over this period, but as many as 25.3 percent fell into poverty, thus 11.5 percent more cultivators were poor in 2005 than had been in poverty 12 years previously. Agricultural labourers also experienced a net increase in the stock of poverty, from 44.8 percent in 1993-94 to 50.5 percent in 2004-05. These observations find reflection in evidence of stagnant or declining per capita agricultural productivity (GOI 2007; Shariff 2009).

Only those rural groups who derive the major part of their income from non-farm work have experienced a reduction in poverty. More escapes from poverty than descents into poverty occurred among non-farm manual workers, non-farm self-employed and, especially, among those for whom regular salaries provide the principal income source.

Relying upon farm income alone is no longer a reliable strategy for escaping poverty in most parts of rural India. Diversifying income sources away from agriculture is a better strategy, as grassroots investigations have also shown.

Notice also that apart from a residual category ('Others'), constituting no more than 2.7 percent of the entire sample, every socio-religious group experienced more descents into than escapes from poverty. A total of 20.6 percent of Scheduled Castes and Scheduled Tribes (SCs and STs) escaped poverty over this 12-year period and a higher proportion, 23.7 percent, fell into poverty.¹⁶ The experiences of higher-caste Hindus were not qualitatively different in this regard: 14.7 percent escaped poverty, and 17.5 percent fell into poverty. The stock of poverty grew among higher- as well as lower-caste groups. It also grew among more educated and less educated households, although not by equal amounts.

in their estimation, shared in the gains of national economic growth. Bhide and Mehta (2004) draw upon a later NCAER panel data set of 3,139 rural households considered in 1970-71 and 1981-82. Correlates of exit from and entry into poverty are distinguished, but state and regional effects are not examined, perhaps because of sample size limitations. See also NCAER (1986a and 1986b), which draw upon some of the same data.

¹⁶ Scheduled Castes is an administrative category referring to formerly untouchable groups. Scheduled Tribes corresponds, roughly, to India's aboriginal people.

A typology of states and regions: escape rates and descent rates

Important differences across states can also be seen in Table 1. Consider the rates of escaping poverty ('Became non-poor') and falling into poverty ('Became poor'). On average, the rate of escaping poverty over this 12-year period was 18.2 percent across all states, but some states (such as Himachal Pradesh, Karnataka and Kerala) had much higher-than-average escape rates, while other states had lower-than-average escape rates (for instance, Andhra Pradesh, Haryana and Maharashtra). Similarly, the rate of falling into poverty (the descent rate) was 22.1 percent on average across all states. But in some states, notably, Himachal Pradesh, Haryana and Punjab, the descent rate was considerably lower than the average for rural India. In other states, including Bihar, Madhya Pradesh and Orissa, the descent rate was higher than the national average.

The overall gain in terms of poverty reduction in any state is simply the resultant of these parallel and opposite flows. The superior performance of Himachal Pradesh and Kerala is accounted for by the fact of a high escape rate (respectively, 24.3 percent and 29.3 percent) going together with a low descent rate (respectively, 9.1 percent and 12.8 percent). The opposite trend – composed of a low escape rate and a high descent rate – was experienced in states like Andhra Pradesh, Maharashtra and Madhya Pradesh, where the stock of poverty grew (respectively, by ten percent, 12.8 percent and 15.4 percent) over the period between 1993 and 2005.

States (and regions within states) can be classified in terms of their escape rate and descent rate. Grassroots investigations undertaken in the past have shown that these flows are asymmetric in terms of reasons.¹⁷ Our examination of reasons associated, respectively, with escapes and descents (presented in the next two sections) reproduced a similar conclusion, albeit on a wider scale: one set of reasons is associated with people's escapes from poverty, while another set of reasons is associated with descents into poverty. Thus, not one but two sets of poverty policies are required in parallel. One set of policy responses is required to promote more escapes. Simultaneously, a second set of policies is required to block descents into poverty. The faster the pace of descents in some region, the more urgently will policies of the second set be required, but where descents are fewer in number, resources can be concentrated, instead, on promoting more escapes from poverty.

Different combinations of poverty policies are required, depending upon the relative rates of escape and descent. Classifying states in terms of escape rates and descent rates helps identify the most appropriate mix of poverty policies. We present such a classification below after first examining escape rates and descent rates for different

¹⁷ See the references cited in Footnote 3.

Table 3: Escape and descent rates in different regions (1993-2005)

States/regions	Escape rate	Descent rate	Net change
Andhra Pradesh	13.7	23.7	-10.0
Coastal	19.6	17.7	1.8
Inland Northern	9.3	32.5	-23.1
South Western	5.8	35.9	-30.1
Inland Southern	16.7	9.4	7.2
Bihar	19.4	27.7	-8.3
Northern	18.3	38.0	-19.8
Central	17.9	23.9	-6.0
Jharkhand	22.5	15.5	7.0
Gujarat	17.6	22.6	-5.0
Eastern & Plains Southern	17.1	22.4	-5.3
Plains Northern	26.0	20.6	5.4
Saurashtra & Dry areas	11.5	24.5	-13.0
Haryana	14.8	18.2	-3.4
Eastern	15.9	19.1	-3.2
Western	12.2	16.1	-3.9
Himachal Pradesh	24.3	9.1	15.2
Karnataka	24.2	21.9	2.3
Coastal, Ghats, & Inland Eastern	31.7	11.2	20.5
Inland Southern	21.5	27.8	-6.3
Inland Northern	17.6	27.0	-9.4
Kerala	29.3	12.8	16.5
Maharashtra	11.9	24.7	-12.8
Inland Western & Coastal	9.5	24.7	-15.2
Inland Northern	8.4	28.5	-20.1
Inland Central	10.9	25.9	-14.9
Inland Eastern	18.8	24.8	-5.9
Eastern	12.9	17.0	-4.1
Madhya Pradesh	14.6	30.0	-15.4
Vindhya	21.5	25.1	-3.6
Central	4.4	47.4	-43.1
Malwa	8.5	47.4	-38.9
South	17.1	20.0	-2.9
South Western	15.7	24.7	-9.0
Northern	7.0	37.5	-30.5
Chhattisgarh	17.8	22.0	-4.2
Orissa	13.9	25.2	-11.3
Coastal & Southern	14.9	23.8	-8.9
Northern	13.1	26.5	-13.3
Punjab	18.2	15.3	2.9
Northern	18.8	11.9	6.9
Southern	17.7	18.8	-1.1
Rajasthan	22.4	17.3	5.1
Western	22.9	16.5	6.5
North-Eastern	22.5	15.3	7.2
Southern & South-Eastern	21.3	24.4	-3.0

Table 3 (cont.)			
States/regions	Escape rate	Descent rate	Net change
Tamil Nadu	17.9	22.9	-5.0
Coastal & Coastal Northern	22.5	21.3	1.2
Southern	19.5	21.1	-1.6
Inland	10.4	26.4	-15.9
Uttar Pradesh	19.8	24.0	-4.3
Western	20.6	23.6	-3.0
Eastern & Central	19.8	26.7	-6.9
Uttaranchal	18.4	19.0	-0.6
West Bengal & NE	26.1	16.9	9.2
Himalayan	28.3	15.2	13.1
Eastern Plains	21.7	18.2	3.5
Central Plains	26.6	16.9	9.7
Assam & NE	43.0	14.0	29.0

regions within states (Table 3). Within states, regions differ markedly in terms of the escape rate and the descent rate. (Appendix 2 describes these regions in terms of constituent districts.)

Consider, for instance, Andhra Pradesh, the first state reported in Table 3. Two regions of this state (Coastal and Inland Southern) had higher-than-average escape rates and lower-than-average descent rates. The stock of rural poverty fell within both of these regions. Conversely, the other two regions of Andhra Pradesh (Inland Northern and South Western) had lower-than-average escape rates and higher-than-average descent rates. Their stocks of rural poverty increased considerably. Because descent rates are very high, preventive policies are sorely needed in the Inland Northern and South Western regions of this state. But in the other two regions, Coastal and Inland Southern, additional resources will be better expended on further boosting the escape rate.

Different policy mixes will work better within different regions and states of India. Table 4 presents an initial typology that can be better fleshed-out with the help of follow-on investigations, as discussed later. But some pointers to policy precision can be gleaned even from this initial examination.

We divided the escape rate and descent rate into three ranges, respectively, low, medium and high, resulting in a 3x3 typology of regions, requiring different types of policy interventions. Consider, first, the upper-left cell of this table. These are the regions that have most successfully reduced poverty over this 12-year period, because a high escape rate went together with a low descent rate. Two small states, Kerala and Himachal Pradesh, are entirely included within this category. A group of smaller states (Assam and the Northeast) is also included. A poor person in India is best off living within some region of this cell; ceteris paribus, the probability is highest that her circumstances will improve.

Table 4: A typology of states and regions

		Escape rate		
		<i>High (43.0-21.3)</i>	<i>Medium (21.2-15.9)</i>	<i>Low (15.8-4.4)</i>
Descent rate	<i>Low (18.7-9.1)</i>	Assam & Northeast	AP-Coastal	Maharashtra-Eastern
		Karnataka - Coastal, Ghats, & Inland Eastern	Punjab-Northern	Haryana-Western
		Kerala	AP-Inland Southern	
		WB-Himalayan		
		WB-Central Plains		
		Himachal Pradesh		
		Rajasthan-Western		
		Rajasthan-North-Eastern		
		Bihar-Jharkhand		
		West Bengal-Eastern Plains		
	<i>Medium (24.7-18.8)</i>	Gujarat-Plains Northern	UP-Western	MP-South Western
		TN-Coastal & Coastal Northern	TN-Southern	Orissa-Coastal & Southern
		Rajasthan-Southern & South-Eastern	UP-Uttaranchal	Gujarat-Saurashtra & Dry areas
			Bihar-Central	Maharashtra-Inland Western & Coastal
			MP-Chhattisgarh	
			Punjab-Southern	
			MP-South	
			Gujarat-Eastern & Plains Southern	
	<i>High (47.4-24.8)</i>	Karnataka -Inland Southern	UP-Eastern & Central	Orissa-Northern
		MP-Vindhya	Maharashtra-Inland Eastern	Maharashtra-Inland Central
			Bihar-Northern	TN-Inland
			Karnataka-Inland Northern	AP-Inland Northern
				MP-Malwa
				Maharashtra-Inland Northern
				MP-Northern
				AP-South Western
				MP-Central

For a contrasting situation, consider the regions included within the bottom-right cell, including Orissa-Northern and Maharashtra-Inland Central, characterised by low escape rates and high descent rates. Compared to other regions in India, the prospect for poor people in these regions is bleak. The chances that people will escape poverty are the lowest among all regions; the chances of further impoverishment are highest. Considerable efforts will have to be made in the future, first, for lowering the high rate of descent, and second, for ramping up the low escape rate. We will consider below what

needs to be done in each respect after identifying factors that are associated, respectively, with falling into poverty and escaping poverty.

A more nuanced prognosis emerges for regions included within off-diagonal cells. Consider, for example, the two regions belonging to the bottom-left cell (Karnataka-Inland Southern and Madhya Pradesh-Vindhya). A high escape rate within these regions was compromised by a high descent rate. Future poverty reduction efforts in these regions would do well to focus primarily on reducing the high descent rate. It makes greater sense to direct additional resources towards raising the escape rate only after the high descent rate has been brought under control, for what good does it do if someone who escapes poverty today remains at high risk of falling back into poverty tomorrow? The opposite policy prescription seems appropriate for regions belonging to the top-right cell of Table 4. In Maharashtra-Eastern and Haryana-Western, additional resources should be deployed primarily for raising poor people's chances of escape.

Notice that entire states do not fit easily within any one of the nine cells (apart from the exceptions noted above). Regions within states have disparate combinations of escape and descent rates. Different policy mixes, combining different elements of prevention and support, are required in diverse regions of different states. This observation provides us with the first clue about why a uniform poverty policy will not be effective for entire states, far less the entire country. A second clue emerges when we investigate the reasons associated, respectively, with escapes and descents.

Aggregate analysis: factors associated with escape or descent

What needs to be done for raising households' chances for escaping poverty, and what should be done for lowering the risks of descent? How should preventive and supportive policies be designed in the future? What lessons can be learned from the past? We identify below the factors that were associated, respectively, with households' escapes and descents over the 12-year period covered by our data. This aggregate analysis is complemented in the following section with similar analyses conducted for individual states.

We utilised logistic regression analysis to compare the attributes and experiences of households who escaped poverty with those of households who have remained poor. Separately, another set of analyses compared households who fell into poverty with others who have remained non-poor. Table 5 provides the results of both sets of analyses. Alternative specifications of these regression models did not produce any different results in terms of which independent variables gained significance.¹⁸ Variables

¹⁸ Tests of multi-collinearity were carried out to investigate the relationship among the independent variables examine below. Zero-order correlations did not show any high degree of

**Table 5: Aggregate analysis of escape and descent
(results of binary logit regressions)**

	Escape		Descent	
	Coef.	P> z	Coef.	P> z
Age of household head (<i>Comparison category: Age < 30 years</i>)				
HH head aged 30-40 years	-0.083	0.539	0.191	0.097
HH head aged 40 + years	0.389	0.002	-0.290	0.008
Household size	-0.198	0.000	0.136	0.000
Male advantage in HH sex ratio	1.021	0.000	-0.846	0.000
Socio-religious group (<i>Comparison category: High-caste Hindus</i>)				
SCs & STs	-0.166	0.118	0.485	0.000
OBCs	-0.017	0.878	0.218	0.003
Muslims	-0.189	0.186	0.180	0.112
Other - minority	0.699	0.032	0.120	0.544
Education level (household head, 1993) (<i>Comparison category: Illiterate</i>)				
Primary	0.134	0.058	-0.077	0.162
Secondary and above	0.225	0.139	-0.293	0.001
Other household characteristics				
Women work 1993	-0.097	0.152	0.111	0.034
Children work 1993	0.069	0.519	-0.046	0.652
Land owned (acres)	0.002	0.270	-0.003	0.000
Land owned squared	0.000	0.140	0.000	0.000
Asset index 1993	0.038	0.073	-0.092	0.000
Presence of adult son 1993	0.259	0.000	-0.027	0.620
Presence of adult daughter 1993	0.086	0.312	-0.194	0.005
Split households	-0.209	0.011	0.133	0.033
Community characteristics				
Within 5 km of nearest town	0.184	0.017	-0.083	0.190
Availability of bus stop	0.299	0.000	0.014	0.810
Percent households with telephone	0.021	0.000	-0.016	0.000
Safe drinking water	-0.022	0.780	0.063	0.294
Enabling/disabling factors				
Change in the share of RNFY	0.001	0.011	0.000	0.000
Remittances (in Rs. '000)	0.064	0.000	-0.047	0.000
Government assistance (in Rs. '000)	0.026	0.412	-0.033	0.095
Social networks	0.136	0.063	-0.297	0.000
Participation in civil society	0.063	0.454	-0.263	0.000
Women's media exposure	0.332	0.000	-0.285	0.000
Trust in state government	0.035	0.669	-0.030	0.628
Trust in village panchayat	0.077	0.356	-0.263	0.000
Loan taken in last 5 years	-0.199	0.003	0.313	0.000
Morbidity	-0.193	0.010	0.057	0.314
State fixed effects (<i>Comparison: Gujarat</i>)				
Bihar	0.326	0.074	0.271	0.066
Andhra Pradesh	1.510	0.000	-0.404	0.005
Haryana	0.505	0.015	-0.423	0.005

association. Further tests of the variance inflation factor (VIF) and tolerance generated an acceptable value range from 1.02 to 4.22, far lower than values that can be considered high.

Table 5 (cont.)	Escape coef.	P> z 	Descent coef.	P> z
Himachal Pradesh	0.256	0.207	-0.640	0.001
Karnataka	0.562	0.004	0.057	0.710
Kerala	0.236	0.486	0.368	0.136
Maharashtra	0.027	0.880	-0.005	0.966
Madhya Pradesh (incl. Chhattisgarh)	0.255	0.130	0.039	0.761
Orissa	-0.600	0.001	0.426	0.005
Punjab	0.190	0.394	-0.360	0.042
Rajasthan	0.452	0.011	-0.481	0.001
Tamil Nadu	0.257	0.249	-0.086	0.594
UP (incl. Uttarachal)	0.218	0.253	-0.036	0.821
West Bengal (and Northeast)	0.236	0.161	-0.237	0.119
Constant	-0.626	0.018	-0.039	0.850
Number of observations		4860		8599
LR chi2(50)		876		1362
Prob > chi2		0.000		0.000
Pseudo R2		0.130		0.123

that are significant at the 0.05 level or better have been highlighted in bold. A positive (and bold) coefficient in the column for escaping poverty indicates that the associated variable raises the odds of escaping poverty. These are the factors that should be promoted by policy. Conversely, a negative (and bold) coefficient in the column for falling into poverty denotes those factors that should be promoted, because these are the variables that reduce the risk of descent.

At the aggregate level, three sets of factors can be distinguished from this analysis. While some factors are significantly associated both with escapes and descents, a large number of factors that are significant for escapes are not significant for descents – and vice versa. Different interventions are required, therefore, to promote escapes and prevent descents. Two separate sets of poverty policies are necessary.

Factors significantly associated both with escape and descent

Household characteristics: Age of household head, household size, household composition (reflected by the variable 'male advantage'), and split households.

Community characteristics: Percent households with telephone.

Enabling/disabling factors: Change in share of rural non-farm income (RNFY), remittances, women's media exposure and loan taken in last five years.

Factors associated with escape but not with descent

Socio-religious group: Other minority.

Household characteristics: Presence of adult son in 1993.

Community characteristics: Within kilometres of nearest town, availability of bus stop, morbidity (adverse effect).

Factors associated with descent but not with escape

Socio-religious group: SC and ST (adverse effect), Other Backward Castes (OBC) (adverse effect).

Household characteristics: Head educated to secondary level or higher (lower risk of descent), women work 1993 (adverse effect), land owned, asset index, presence of adult daughter.¹⁹

Enabling/disabling factors: social networks, participation in civil society, trust in village panchayat (local government).

One broad generalisation can be stated as follows: assets and capabilities residing within rural areas can help reduce the risk of descent into poverty, but do not significantly assist escapes from poverty. Possession of rural-origin material assets – such as agricultural land as well as other material assets (indicated by households' scores on the asset index) – significantly reduced the odds of falling into poverty, but it did not improve the prospects for escaping poverty (in this context, also see Note 14). Similarly, rural social assets – including households' participation in civil society organisations of different kinds, membership in rural social networks, and level of trust in the village panchayat – reduced the risk of falling into poverty, but having access to local institutions and networks in rural areas did not significantly assist households' efforts for escaping poverty.

Escaping poverty in rural areas requires developing a connection with the city. Households residing in villages located fewer than five kilometres from the nearest city and connected by better bus services and denser telephone links had significantly higher odds of breaking out of poverty. Households who derived a higher share of income from non-farm sources in 2004-05 compared to 1993-94 had a significantly higher chance of escaping poverty. Remittances sent by a household member in the city further enhanced the odds for escape.

Surprisingly, the education level of the household head did not make a significant difference to the probability of escape. Compared to households headed by illiterate individuals, the odds of escaping poverty were not significantly different for other rural households. On the other hand, the risk of descent was significantly lower among households whose heads had secondary or higher levels of education, although having only primary education did not convey the same advantage.

Information matters separately from education. The variable, women's media exposure, is strongly related to both escape and descent. Having better informed women in one's

¹⁹ Why this particular variable, presence of adult daughter (in 1993), should significantly lower the odds of falling into poverty is a puzzling result.

household resulted in raising the odds of escaping poverty and lowering the risk of falling into poverty.

Age, i.e., an individual's position in the life cycle, also matters. Households with heads who are above 40 years of age were significantly more likely to escape poverty compared to other households and significantly less likely to fall into poverty. Household size and composition also had the expected effects. Larger households were less likely to escape poverty and more likely to fall into poverty. Households who have split since 1993 faced significantly lower odds of moving out of poverty and significantly higher odds of falling into poverty. Households who had a larger share of male members were more likely than others to escape poverty and less likely to fall into poverty.²⁰

Among different socio-religious groups, SCs, STs and OBCs were more likely to fall into poverty compared to higher-caste Hindus, but their chances of escaping poverty were not significantly different. Muslims had neither higher nor lower chances of escape or descent. However, other minorities had a significantly higher chance of escaping poverty.

The state within which one lives also has a significant effect. Zero-one variables for several states gained significance in this analysis, indicating that factors other than the ones identified above also make a difference for escapes and descents. Gujarat was selected as the comparison state for this part of the analysis, because the escape rate and descent rate in Gujarat are close to the average for all states. Households in three states – Andhra Pradesh, Haryana and Rajasthan – had significantly higher odds of escape and significantly lower odds of descent (compared to Gujarat). Conversely, households in Orissa had significantly lower odds of escape and higher odds of descent, indicating that there is much to rectify in this state. In Himachal Pradesh, the odds of escape were not significantly different from Gujarat, but the odds of descent were significantly lower. The opposite situation prevailed in Punjab: the odds of falling into poverty were significantly higher. In Karnataka the risk of falling into poverty was not significantly different from Gujarat, but the chances of escaping poverty were significantly better. In other states, the odds of descent and escape were not significantly different from those in Gujarat. The effects of specific states' historical legacies and current policies are captured in part by these state fixed effects.²¹

²⁰ While providing an indication of continuing gender imbalances in rural India, this variable matters more in some states and less in some others, as we will see in the next section.

²¹ These effects also capture to some extent the impacts of different state-level variables identified by analysts who have worked with aggregate data, including rates of growth of state domestic product, infrastructure, agricultural productivity, health care provision, and levels of development spending. Some other variables, not equally amenable to quantitative examination, but highlighted by anthropological inquiries, include differences across states in age of marriage, and amounts expended in dowries and weddings, etc. These features can also contribute to the significance of the state variable, as shown by grassroots-level inquiries conducted in the past. See Krishna (2010).

Two sets of poverty policies could be proposed for all of India based on this aggregate national-level identification of factors associated with escapes and descents. A preventive policy – intended to thwart descents into poverty – would, among other things, aim to strengthen local social networks, raise civil society participation, bolster village panchayats, and give larger numbers of women access to information and education. Simultaneously, a supportive policy – aimed at raising the numbers of escapes from poverty – would seek to improve road and rail networks between villages and cities, spread further the networks of mobile telephones and land lines, and enable more village residents to gain access to non-farm sources of income, while also targeting other factors identified by aggregate analyses of the past.

Any such conclusion would be premature, however. Examinations of aggregate countrywide data tend to paper over and hide the vast differences that exist across and within states in India. Policy proposals generated from such aggregate analyses can fall short in important respects. As seen in the next section, any uniform national policy would be irrelevant for many states and regions; reasons for descent and escape have more localised effects.

Disaggregated analysis: explaining escapes and descents within particular states

We conducted separate analyses of escapes and descents for each specific state. These analyses parallel the aggregate analysis reported above; the same sets of independent variables were considered. In place of state fixed effects, we examined fixed effects associated with regions within states (see Appendix 2 for a description of these regions). The space available does not allow a full reproduction of these results, which would, in any case, be repetitive and redundant for most readers. Instead, in Table 6 we present a summary of the results obtained in terms of the variables that gained significance, respectively, for escapes and for descents.

There is not a single variable that is consistently significant (or not significant) across all states. Thus, no standardised policy will be uniformly effective..Consider, for example, the variable 'percent households with telephones', which was found to be consistently and strongly associated both with escapes and descents in the aggregate analysis of the previous section. The disaggregated analysis presented in Table 6 shows that in 11 of 15 states this variable is not significant for explaining escapes from poverty. Additionally, in nine of 15 states this variable is not significant for descents into poverty. But this particular variable is hardly peculiar in this regard. Consider two other variables – change in share of RNFY (rural non-farm income) and remittances – which formed part of our broad generalisation that rural folk need non-farm

Table 6. Significance of variables in states (summary of results)

Variables/state		Guj	Bih	AP	Har	HP	Kar	Keral	Mah	MP	Ori	Pun	Raj	TN	UP	WB
Household characteristics																
Head primary educated 1993	Escape	n.s.	n.s.	n.s.	n.s.	n.s.	++	n.s.	n.s.	++	++	n.s.	n.s.	n.s.	n.s.	+++
	Descent	n.s.	n.s.	n.s.	n.s.	++	+	n.s.	+++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Head secondary educated 1993	Escape	++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+++	n.s.	n.s.	n.s.	n.s.	n.s.
	Descent	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	++	++	n.s.	+++	n.s.	++	n.s.	n.s.	n.s.
Land owned (acres)	Escape	n.s.	n.s.	n.s.	n.s.	++	n.s.	+	n.s.	n.s.	n.s.	n.s.	+++	n.s.	++	n.s.
	Descent	++	n.s.	n.s.	+++	n.s.	n.s.	n.s.	n.s.	+++	n.s.	n.s.	+++	n.s.	n.s.	n.s.
Asset index 1993	Escape	n.s.	n.s.	+	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+	n.s.	n.s.	+++
	Descent	+	+++	n.s.	n.s.	n.s.	n.s.	n.s.	+++	+++	+++	n.s.	+	n.s.	+++	n.s.
Presence of adult son 1993	Escape	n.s.	n.s.	+	++	n.s.	n.s.	n.s.	+	++	+	n.s.	n.s.	n.s.	n.s.	n.s.
	Descent	n.s.	n.s.	n.s.	n.s.	n.s.	++	++	+	n.s.	+	++	n.s.	n.s.	n.s.	n.s.
Presence of adult daughter 1993	Escape	n.s.	n.s.	+++	n.s.	n.s.	++	++	+	n.s.	n.s.	n.s.	+	n.s.	+++	+
	Descent	n.s.	n.s.	n.s.	n.s.	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Community characteristics																
Within 5 km of nearest town	Escape	n.s.	n.s.	n.s.	n.s.	n.s.	++	n.s.	n.s.	++	n.s.	n.s.	n.s.	+	n.s.	n.s.
	Descent	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+	+	n.s.	++	n.s.
Availability of bus stop	Escape	n.s.	n.s.	+	+	+	n.s.		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+++	+
	Descent	n.s.	n.s.	n.s.	++	++	n.s.		n.s.	+	++	n.s.	n.s.	n.s.	n.s.	n.s.
Percent HH with telephone	Escape	++	n.s.	n.s.	n.s.	+++	n.s.	n.s.	n.s.	+++	++	n.s.	n.s.	n.s.	n.s.	n.s.
	Descent	+	n.s.	++	n.s.	n.s.	++	+++	n.s.	+++	n.s.	n.s.	++	n.s.	n.s.	n.s.
Safe drinking water	Escape	n.s.	++	n.s.	++	n.s.	+		+++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+
	Descent	n.s.	+	+	n.s.	n.s.	+++		++	++	n.s.	n.s.	++	+++	n.s.	n.s.
Enabling/disabling factors																
Change in the share of RNFY	Escape	+++	n.s.	n.s.	+	n.s.	n.s.	n.s.	++	n.s.	n.s.	+	n.s.	n.s.	n.s.	+++
	Descent	n.s.	n.s.	+	n.s.	++	n.s.	n.s.	n.s.	+	n.s.	n.s.	+++	n.s.	n.s.	n.s.
Remittances	Escape	n.s.	+++	n.s.	n.s.	++	n.s.	n.s.	++	n.s.	+++	n.s.	+++	n.s.	+	n.s.
	Descent	n.s.	+++	n.s.	n.s.	n.s.	n.s.	n.s.	++	+	+++	n.s.	+++	+	n.s.	+
Government assistance	Escape	++	n.s.	n.s.	n.s.	n.s.	n.s.		n.s.	n.s.	+	n.s.	n.s.	n.s.	+++	n.s.
	Descent	n.s.	n.s.		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Table 6 (cont.)		Guj	Bih	AP	Har	HP	Kar	Keral	Mah	MP	Ori	Pun	Raj	TN	UP	WB
Social networks	Escape	++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+++	n.s.	++	n.s.	n.s.	++
	Descent	n.s.	n.s.	+	n.s.	n.s.	n.s.	n.s.	n.s.	+++	n.s.	n.s.	+++	++	n.s.	+++
Participation in civil society	Escape	++	+++	n.s.	n.s.	n.s.	n.s.	+	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	Descent	n.s.	+++	n.s.	n.s.	++	n.s.	n.s.	n.s.	n.s.	++	n.s.	+	n.s.	n.s.	+
Women's media exposure	Escape	n.s.	+++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	++	n.s.	+	+	n.s.	n.s.	n.s.
	Descent	++	+++	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	+	+++	n.s.	+	n.s.	n.s.
Trust in state government	Escape	n.s.	n.s.	n.s.	+++	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	+++	n.s.	+++	n.s.
	Descent	+	n.s.	n.s.	n.s.	n.s.	n.s.	+	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Trust in village panchayat	Escape	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
	Descent	n.s.	n.s.	n.s.	+	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	+
Loan taken in last 5 years	Escape	n.s.	++	n.s.	n.s.	+	n.s.	n.s.	n.s.	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.
	Descent	n.s.	+++	n.s.	++	++	n.s.	n.s.	n.s.	n.s.	+++	n.s.	++	n.s.	n.s.	+++
Morbidity	Escape	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	++	n.s.	n.s.	n.s.	++	n.s.	n.s.	n.s.	++
	Descent	n.s.	n.s.	+	n.s.	n.s.	++	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Note: +++p-value<0.01, ++p-value<0.05, +p-value<0.10; indicates statistical significance at the 1%, 5%, and 10% levels; n.s. = not significant																

incomes in order to get ahead. This broad generalisation, like others of its kind, breaks down when poverty flows are examined at the level of individual states. Remittances were found to be not significant for escaping poverty in nine of 15 states and not significant for descents in eight states. Similarly, another variable, women's media exposure, which aggregate analysis revealed to be strongly associated both with escape and descent, is not significant for escaping poverty in 11 of 15 states. Its strong association with escapes in the four remaining states (Bihar, Madhya Pradesh, Punjab and Rajasthan) appears to be driving the aggregate result.

The point we are making is not so much that aggregate analysis is unnecessary or misleading, but that it is an incomplete guide for policymaking and programme design. Analyses of aggregate national results have to be complemented by decentralised inquiries conducted at the level of states and regions within states. Specific opportunities exist and different threats operate within diverse states and regions. Resources are much better utilised when they are directed towards such context-specific threats and opportunities.

Zero-one variables for several regions gained significance within these state-specific analyses. For instance, in Andhra Pradesh, a significantly higher risk of falling into poverty was associated with being resident in the Inland Northern region (composed by Adilabad, Nizamabad, Medak and Khammam districts). Prior qualitative work carried out in one of these districts (Khammam) shows why households here have faced significantly higher risks of falling into poverty. Briefly, a failure of irrigation systems in several villages of this district, coupled with a higher incidence of diseases requiring expensive treatments, made the prospects for descent worse in this district compared to others of this state (Krishna 2006). Similarly, in Rajasthan, a significantly higher probability of escaping poverty was associated with the Northeastern region, while the risk of descent was significantly higher in the Southern and Southeastern region (Rajsamand, Udaipur and Jhalawar districts). Once again, prior qualitative work conducted in villages of Rajsamand and Udaipur district shows why higher risks of descent were faced in these areas. Three types of household-level events were preponderantly associated with experiences of falling into poverty: first, illnesses, injuries, and high health care costs; second, heavy expenditures on marriages and, especially in this region, on customary funeral feasts; and third, high-interest loans taken from private moneylenders contributed to a relatively high incidence of falling into poverty (Krishna 2004).

Household-level events and processes – like illnesses and injuries, deaths and marriages, irrigation failures and irrigation successes on large or small scales – matter critically for households' economic trajectories over time. Some events, like ill health and high health care costs, were found to be commonly associated with descents into poverty in every region where grassroots investigations were conducted. Indeed,

analysts have calculated that more than three percent of the entire population of India, or approximately 32.5 million people – ‘not only households just above the poverty line but also many households well above the poverty line’ – are pushed into poverty every year on account of high medical expenses.²² Other household-level events have more localised effects. For instance, while diversification of income sources was commonly important for escaping poverty in rural areas of three Andhra Pradesh districts, different types of diversification strategies worked better within specific districts. In Nalgonda and Khammam districts, households escaping poverty set up tiny businesses in their home village or they sent one of their members to work in the informal sector in a city. A different set of opportunities was availed of by households escaping poverty in East Godavari district. They diversified into non-traditional crops (Krishna 2007).

The natures of opportunities and threats vary considerably across regions within the same state; thus, a more fine-grained investigation of poverty dynamics is necessary. Examinations of large-scale panel data sets must be complemented by grassroots studies investigating household event histories. Formulating the most effective policies requires moving away from standardised countrywide policies, examining trends and reasons closer to the ground.

Conclusion

India is more fortunate than many other countries in having a vast pool of national data related to poverty. Regularly updated, surveys by the NSSO and other agencies provide estimates of the stocks of poverty at the state and national levels. Drawing upon these data, sophisticated analyses have been developed, identifying factors associated with poverty reduction in the aggregate. Relatively little has been understood, however, about why some (but not other) people are able to escape poverty. Even less is known about how poverty comes into being: were all presently poor people born into poverty? How many among them have become poor within their lifetimes? How can poverty creation be better prevented in the future? Because flows into and out of poverty have not been investigated with the same degree of seriousness that has accompanied the analysis of poverty stocks, these critical questions have been largely left unexamined. Potentially important policy levers have been left unexplored as a result. It is time that better efforts were mounted based on more decentralised research.

Different escape and descent rates characterise diverse states and regions of India. Different reasons for escape and descent operate across state boundaries. This analysis of more than 13,000 households shows that there is not a single factor that matters

²² Garg and Karan (2005: 11-12). On the significance of ill health and health care expenses for the creation and perpetuation of poverty in India, see also Dilip and Duggal (2002); Gupta and Mitra (2004); and Iyer, Sen and George (2007).

commonly nationwide. Considering only the aggregate results obscures the critical differences in trends and reasons operating across states and regions.

States with high and low rates of economic growth have variously experienced high and low rates of escape and descent. No clear correlation exists at the level of states between higher growth rates and faster poverty reduction. Thus, to claim that 'growth of aggregate consumption/income is a sufficient condition for poverty reduction'²³ does not amount to an adequate policy prescription.

Rather than waiting for growth to occur and work its putative magic, direct actions to reduce poverty are necessary. Action along two fronts is simultaneously required: descents into poverty must be prevented, using context-specific measures, even as escapes from poverty are promoted vigorously with the help of other context-specific interventions. The reasons that matter for escape and descent not only differ from one another; importantly, they differ considerably across and within states. Any uniform national policy does not, therefore, represent the best use of resources. State- and region-specific threats and opportunities must be separately identified and directly addressed.

This article provides an example of the kinds of investigations that need to be conducted in greater depth and with higher frequency in the future. While the regression results reported above are significant in their entirety,²⁴ and while several significant factors have been identified, the overall explanatory power of the model can be further improved by considering household events in greater depth and detail and by including regional and sub-regional analyses. The sample of households examined here is quite large; more than 13,000 households were considered in both years. Still, when considered at the level of regions within states, the size of the sample is too small for meaningful analysis. These shortcomings of the present data set must be reckoned with in future investigations. Decentralised, mixed-methods inquiries will help reveal what needs to be done in each specific region. Progress against poverty will be better as a result.

²³ GOI (2009a: 261).

²⁴ As indicated by the chi-statistics.

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Appendix 1: Description of variables

Variable	N*	Description
Age of household head		
HH head aged < 30	827	Household head aged < 30 years: 2004-05
HH head aged 30-40 years	2755	Household head aged 30-40 years: 2004-05
HH head aged 40 + years	9877	Household head > 40 years: 2004-05
Household size	13459	Number of household members: 2004-05
Male advantage in HH sex ratio	13459	Share of male members in household: 2004-05
Socio-religious group		
High-caste Hindus	2750	zero-one variable
SCs & STs	4568	zero-one variable for Scheduled Castes & Tribes
OBCs	4681	zero-one variable for Other Backward Class households
Muslims	1091	zero-one variable for Muslims
Other - minority	369	zero-one variable for other minority households
Education level (household head)		
Illiterate	6932	Household head illiterate (1993-94)
Primary	5133	Household head educated to primary level (1993-94)
Secondary and above	1394	Household head educated to secondary level or beyond (1993-94)
Other household characteristics		
Women work 1993	7261	Scored '1' if at least one woman aged 15-59 years worked outside the household in 1993-94; zero otherwise
Children work 1993	984	Scored '1' if at least one child 6-14 years worked outside the household in 1993-94; zero otherwise
Land owned (in acres)	13459	Cultivable land in acres owned by the household in 1993-94.
Asset index 1993	13459	An index of utility asset, such as bicycle, motor cycle/scooter, car, radio/transistor, television, VCR/VCP, air cooler, fan and bio-gas plant (1993-94)
Presence of adult son 1993	7114	Scored '1' if at least one son aged 15 years and above was part of the household in 1993-94; zero otherwise
Presence of adult daughter 1993	2445	Scored '1' if at least one daughter aged 15 years and above was part of the household in 1993-94; zero otherwise
Split households	3982	Scored '1' if the original household, surveyed in 1993-94, was split by 2004-05; zero otherwise
Community characteristics		
Within 5 km of nearest town	3047	Scored '1' if the nearest town is < 5 kms from the village; zero otherwise (2004-05)
Availability of bus stop	8587	Scored '1' if village was served with a bus stop in 1993-94; zero otherwise
Percent households with telephone	13459	Percentage of household with mobile phones or land lines in the village (2004-05)
Safe drinking water	4899	Scored '1' if safe drinking water sources, such as hand pumps, tube wells or piped water supplies, were available in the village in 2004-05
Enabling/disabling factors		
Change in the share of RNFY	13459	Percentage change in the household's share of non-farm income to total income (1993-04 to 2004-05)
Remittances (in Rs. '000)	13459	Amount of remittances received from household members who have out-migrated (Rupees, 2004-05)
Government assistance (in Rs. '000)	13459	Amount received as cash payment from any government social protection scheme (Rupees, 2004-05)

Social networks	6897	Scored '1' if the household reported having a relative or friend who is a doctor, nurse, teacher, school official, or in government service; zero otherwise.
Participation in civil society	3357	Scored '1' if the household had affiliation/ membership in two or more local institutions (such as women's group, youth club, sports group, reading room, trade union, business or professional group, self-help groups, credit or savings group, development group, NGO, agricultural, milk or other co-operative society); zero otherwise
Women's media exposure	5974	Scored '1' if women of the household accessed any of newspapers, radio or television; zero otherwise
Trust in state govt	10387	Scored '1' if household expressed confidence in the state government; zero otherwise
Trust in village panchayat	10908	Scored '1' if household expressed confidence in the village panchayat; zero otherwise
Loan taken in last 5 years	6336	Scored '1' if the household reported taking any loan during the five years preceding the 2004-05 survey; zero otherwise
Morbidity	3562	Scored '1' if any adult member of the household had died during the 12 months preceding the 2004-05 survey; zero otherwise
State		
Gujarat	703	
Bihar	881	
AP	780	
Haryana	879	
HP	723	
Karnataka	753	
Kerala	297	
Maha	1403	
MP	1997	
Orissa	932	
Punjab	718	
Raj	1094	
TN	563	
UP	724	
WB and Northeast	1012	

*Note: Numbers for each dummy variable report the frequency of '1' responses.

Appendix 2: States, regions and districts

Region	District	Region	District	Region	District
Andhra Pradesh		Haryana		Maharashtra	
Coastal	Visakhapatnam	Eastern	Panchkula	Inland Northern	Nandurbar
	West Godavari		Ambala		Dhule
	Krishna		Kurukshetra		Jalgaon
	Prakasam		Kaithal		Nasik
Inland Northern	Adilabad		Karnal	Inland Central	Hingoli
	Nizamabad		Sonipat		Parbhani
	Medak		Gurgaon		Jalna
	Khammam		Faridabad		Bid
South Western	Anantapur	Western	Jind	Inland Eastern	Akola
Inland Southern	Cuddapah		Fatehabad		Washim
	Chittoor		Hissar		Amarawati
Bihar			Bhiwani		Yavatmal
Northern	Purbi Champaran		Rewari	Eastern	Bhandara
	Madhubani	Himachal Pradesh			Gondiya
	Supaul	Himachal Pradesh	Chamba		Chandrapur
	Saharsa		Kangra	Madhya Pradesh	
	Muzaffar Pur		Kullu	Vindhya	Tikamgarh
	Siwan		Mandi		Chhatarpur
Central	Bhagal Pur		Hamirpur		Panna
	Nalanda		Bilaspur		Satna
	Kaimur (Bhabua)		Sirmaur		Shahdol
	Rohtas		Shimla		Sidhi
Jharkhand	Palamu	Karnataka		Central	Damoh
	Dhanbad	Coastal, Ghats, & Inland Eastern	Udupi	Malwa	Ratlam
	Ranchi		Dakshin Kannada		Ujjain
	Pashchimi Singbhum		Kodagu		Dewas
Gujarat		Inland Southern	Kolar		Dhar
Eastern & Plains Southern	Narmada		Mysore	South	Dindori
	Bharuch		Chamarajanagar		Mandla
	Vadodara	Inland Northern	Bidar		Seoni
Plains Northern	Patan	Kerala		South Western	West Nimar
	Mahesana	Kerala	Malappuram		Barwani
	Gandhinagar		Thrissur		Betul
	Ahmedabad		Kottayam		Harda
	Anand		Alappuzha		Hoshangabad
	Kheda	Maharashtra		Northern	Sheopur
Saurashtra & Dry areas	Kachchh	Inland Western & Coastal	Ratnagiri		Morena
	Surendranagar		Pune		Datia
	Jamnagar		Ahmadnagar		
	Junagadh		Solapur		
			Satara		

Region	District	Region	District	Region	District
Madhya Pradesh		Punjab		Uttar Pradesh	
Chhattisgarh	Koriya	Southern	Fatehgarh	Eastern & Central	Fatehpur
	Sarguja		Firozpur		Kanpur Dehat
	Jashpur		Sangrur		Kanpur Nagar
	Raigarh	Rajasthan			Kaushambi
	Korba	Western	Churu		Allahabad
	Janjgir		Jodhpur		Chandauli
	Bilas Pur		Pali		Varanasi
	Kawardha	North-Eastern	Jhunjhunu		Sant Ravidas Nagar
	Rajnandgaon		Alwar	Uttaranchal	Bageshwar
	Durg		Bharatpur		Almora
	Raipur		Dhaulpur		Udham Singh Nagar
	Dhamtari		Karauli		Hardwar
	Kanker		Sawai Madhopur	West Bengal	
	Bastar		Sikar	Himalayan	Darjiling
Orissa			Bhilwara		Jalapiguri
Coastal & Southern	Baleshwar	Southern & South-Eastern	Rajsamand	Eastern Plains	Maldah
	Khordha		Udaipur		Murshidabad
	Puri		Jhalawar		Birbhum
	Ganjam	Tamil Nadu			Nadia
	Bhadrak	Coastal & Coastal Northern	Thiruvallur	Central Plains	Bardhaman
	Kandhamal		Kancheepuram		North 24 Parganas
	Baudh		Karur	Assam & NE	
	Koraput		Tiruchchirappalli	Assam & NE	Tripura
Northern	Bargarh		Perambalur		Marigaon
	Jharsuguda		Ariyalur		
	Sambalpur	Southern	Sivaganga		
	Sundargarh		Tirunelveli		
	Kendujhar		Kanniyakumari		
	Mayurbhanj	Inland	Dharampuri		
	Dhenkanal		Erode		
	Anugul		Coimbatore		
	Sonapur	Uttar Pradesh			
	Balangir	Western	Saharanpur		
Punjab			Bijnor		
Northern	Gurdaspur		Moradabad		
	Amritsar		Rampur		
	Kapurthala		Jyotiva Phule Nagar		
	Hoshiarpur		Hathras		
	Nawanshahr		Mathura		
	Rupnagar				
	Ludhiana				

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Our aim is to better understand why people are poor, what keeps them trapped in poverty and how they can be helped - drawing upon the very best international practice in research and policy making.

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