Rural Unemployment 1999-2005: Who Gained, Who Lost?

There is an overall rise in rural unemployment, in terms of both total and partial failure to find work during the reference week, between the 55th (1999-2000) and 61st (2004-05) round employment surveys of the National Sample Survey. This is something of a puzzle given the reported rise in monthly per capita rural expenditure between the two rounds. The decline in unemployment among males with secondary school or higher education, relative to illiterate males, suggests that the rise in rural prosperity closely matches the pattern of access to rural school facilities. Of the four disadvantaged groups tested for, scheduled tribes face the highest incremental unemployment, which remains unchanged into the 61st round. This is an important pointer to the required regional configuration of workfare programmes like the National Rural Employment Guarantee Scheme, and for the spread of rural schools.

ABHIROOP MUKHOPADHYAY, INDIRA RAJARAMAN

I
Introduction

This paper investigates the configuration of rural unemployment in India, based on the two most recent National Sample Survey (NSS) employment surveys, conducted during the 55th round in July-June 1999-2000, and the 61st round in July-June 2004-05, the sixth and seventh in a quinquennial series.[1]

The reported tabulations classify respondents by the major activity during the reference year preceding the date of survey, called usual status (us); by current weekly status (cws), according to the major activity during the reference week preceding the date of survey; and by current daily status (cds), aggregating the labour status recordings for each day of the reference week.[2]

Great care should be taken in interpreting the unemployment rates reported from these surveys. Unemployment could reflect high reservation wages or unavailability of jobs even at low reservation wages. The clustering of districts by usual rural unemployment rates from the 55th round survey in Rajaraman and Mukhopadhyay (2005) reveals quite clearly the reservation wage effect. All districts in Goa and Kerala, states with high education levels, fell in the district clusters with the highest usual unemployment rates. This paper investigates whether there are other factors at play in the determinants of unemployment.

The single NSS code for usual unemployment is split into two for the reference week. Code 81 is for those seeking work, and code 82 for those not seeking but available.[3] If the distinction is carefully preserved in the field survey, code 81 should in principle capture those actively engaged in job search.

Accordingly, this paper looks at unemployment as defined by code 81 in the reference week data. Two sets of specifications are estimated. The first estimates the factors explanatory of the probability of an individual member of the labour force having been in the unemployed state 81 on all days of the reference week. This is obtained by aggregation, and therefore does not quite correspond to the reported current weekly status figures from the NSS tables, which is based on the major activity state during the reference week. Another set of specifications is performed

for time spent unemployed (code 81) during the reference week, so as to measure the intensity of unemployment across respondents.

Section II presents the tabulated NSS figures from the two rounds. Section III describes the data and definitions used in this paper and the specifications tested. Section IV presents the findings. Section V concludes.

II
Reported Unemployment from the Two Rounds

The reported unemployment rates from the two rounds are presented in Table 1. Two usual unemployment rates are reported by the NSS, unadjusted and adjusted for those with principal status as unemployment, but with some form of secondary activity

Table 1: Reported NSS Rural Unemployment Rates in 1999-2000 and 2004-05

Round		Persons	Males	Females
Per cent in the labour force				
Usual (Unadj)	55th	1.9	2.1	1.5
	61st	2.5	2.1	3.1
Usual (Adj)	55th	1.5	1.7	1.0
	61st	1.7	1.6	1.8
Current weekly	55th	3.8	3.9	3.7
	61st	3.9	3.8	4.2
Current daily	55th	7.1	7.2	7.0
	61st	8.2	8.0	8.7
Per cent of persons				
Usual (Unadj)	55th	0.7	1.1	0.4
	61st	1.0	1.2	0.8
Usual (Adj)	55th	0.6	0.9	0.3
	61st	0.7	0.9	0.6
Current weekly	55th	1.5	2.1	1.0
	61st	1.6	2.1	1.2
Current daily	55th	2.6	3.7	1.5
	61st	3.2	4.2	2.1

Notes: The labour force is defined as those in the population greater than age five either employed or seeking work during the reference period concerned.
Source: NSSO, 2001a, table 7.1 for the 55th round data, and NSSO, 2006a, statement 6.1 for the 61st round data.

during the reference year. The reported figures for current weekly and daily status include both codes 81 and 82, and are therefore broader-based than the more stringent definition of unemployment used in this paper.

By whichever definition, there is a rise in unemployment between the two rounds, sharper for females than for males. The most commonly cited figures from the surveys are for unemployment rates as a per cent of the labour force. These show a rise from 1.9 to 2.5 per cent for usual (unadjusted) unemployment, and from 7.1 to 8.2 per cent by current daily status. The table also provides unemployment figures as a per cent of persons (of age 5 and above), which reflect the change without the first stage selection into the labour force. By this definition too, there has been a rise in unemployment between the two rounds. By both definitions, the rise is sharper for females than for males.

These reported findings are seemingly somewhat at odds with the rural consumption data from the two rounds, which show a rise in mean per capita expenditure.[4]

III
Data and Estimation

The pooled sample from the two rounds in 1999-2000 and 2004-05 includes all states, and all respondents falling in the age range 15 or more but under 60 years of age.[5] The surveys contain information on amount of time spent by an individual, in half-day units, in various activities on each day of a seven-day reference week.

First, we model those seeking work but unable to find any during the reference week. We define a dummy variable D_Unemp which takes the value one if the respondent reported the unemployed

Table 2: Rural India: Males and Females Combined (Ages 15-59)

Baseline	Prob of being Unemp on All Days (Unemp=1) Marginal Effects	Time Spent Un-employed Marginal Effects
Individual characteristics		
Demographic		
Age	0.001*	0.015*
Square of age	-0.0000268*	-0.0002578*
D: Male	0.011*	0.169*
D: Married	-0.016*	-0.127*
Education (reference group: illiterate)		
D: Below primary but literate	-0.002**	-0.037*
D: Primary schooling	-0.002*	-0.048*
D: Middle schooling	-0.0002627	-0.055*
D: Secondary schooling	0.009*	-0.002
D: Higher secondary schooling and above	0.029*	0.132*
Household characteristics		
Per capita land possessed	-0.0001569*	-0.0024*
Household size	-0.0002669*	-0.0054*
Age of household head	0.0001721*	0.00145*
D: At least one household member with at least secondary education	-0.002**	-0.044*
(Reference group: households from other social groups)		
D: Scheduled caste household	0.001	0.036*
D: Scheduled tribe household	0.005*	0.089*
D: Other backward caste household	0.001	0.0079***
(Reference group: households from other religions)		
D: Muslim household	0.001	0.0177*
61st round (2004-2005) incremental effects		
D: 61	0.006*	0.068*
D: 61 X D: Male	-0.004*	-0.027*
D: 61 X D: Below primary but literate	0.002	0.026*
D: 61 X D: Primary schooling	0.001	0.018**
D: 61 X D: Middle schooling	-0.000	0.003
D: 61 X D: Secondary schooling	-0.001	-0.016**
D: 61 X D: Higher secondary schooling and above	-0.00035	-0.023*
D: 61 X Per capita land possessed	0.0000069	-0.00042*
D: 61 X D: At least one household member with at least secondary education	-0.001	0.0017
D: 61 X D: Scheduled caste household	-0.0004881	-0.017**
D: 61 X D: Scheduled tribe household	-0.0001042	-0.0045
D: 61 X D: Other backward caste household	0.0001089	0.0044
D: 61 X D: Muslim household	-0.002***	-0.034*
Number of observations	438612	438612

Notes: * Represents significance at 1 per cent, ** at 5 per cent and *** at 10 per cent.

Excluded from the table and included in the estimation: dummies for sub-rounds and state level dummies Robust estimation. For probit estimates, clustering was done at the household level.

Table 3: Rural India: Males (Ages 15-59)

Baseline	Prob of being Unemp on All Days (Unemp=1) Marginal Effects	Time Spent Un-employed Marginal Effects
Individual characteristics		
Demographic		
Age	0.002*	0.013*
Square of age	-0.00004*	-0.00023*
D: Married	-0.026*	-0.084*
Education (reference group: Illiterate)		
D: Below primary but literate	-0.002	-0.029*
D: Primary schooling	-0.003**	-0.041*
D: Middle schooling	0.0001	-0.05*
D: Secondary schooling	0.009*	-0.018**
D: Higher secondary schooling and above	0.031*	0.056*
Household characteristics		
Per capita land possessed	-0.0003*	-0.002*
Household size	-0.0004*	-0.005*
Age of household head	0.0003*	0.0013*
D: At least one household member with at least secondary education	0.0005	-0.025*
(Reference group: Households from other social groups)		
D: Scheduled caste household	0.0008	0.018*
D: Scheduled tribe household	0.009*	0.064*
D: Other backward caste household	0.0003	0.005
(Reference group: Households from other religions)		
D: Muslim household	0.004*	0.033*
61st round (2004-2005) incremental effects		
D: 61	0.005*	0.047*
D: 61 x D: Below primary but literate	0.002	0.020**
D: 61 x D: Primary schooling	-0.0004	0.012***
D: 61 x D: Middle schooling	-0.003	-0.006
D: 61 x D: Secondary schooling	-0.004**	-0.030*
D: 61 x D: Higher secondary schooling and above	-0.003	-0.040*
D: 61 x per capita land possessed	0.00002	-0.0005*
D: 61 x D: At least one household member with at least secondary education	-0.002	-0.002
D: 61 x D: Scheduled caste household	-0.001	-0.021*
D: 61 x D: Scheduled tribe household	-0.0007	-0.001
D: 61 x D: Other backward caste household	0.0005	0.001
D: 61 x D: Muslim household	-0.003	-0.036*
Number of observations	221105	221105

Notes: * Represents significance at 1 per cent, ** at 5 per cent and *** at 10 per cent.

Excluded from the table and included in the estimation: dummies for sub-rounds and state level dummies Robust estimation. For probit estimates, clustering was done at the household level.

state (code 81) on all half days of the reference week. The reference group therefore is those who are either employed (not necessarily full-time) and those not in the labour force. The model is run for the pooled sample including both genders, and then separately for each gender, since labour force participation rates vary by gender.

We include individual characteristics and household characteristics as independent variables, and estimate a probit model. Per capita household expenditure, although available, was not included among the explanatory variables, because it is endogenous to the probability of being unemployed. We also do not use average wages of the employed as these could be potentially systematically biased.

Next, we delve deeper and model the unemployment content of the reference week. The total time unemployed is added up, and this variable (Time_spent_unemp) lies between 0 and 7. Since a large number of these values lie at the extreme values, a tobit model is used for estimation. This model is also estimated for the pooled sample including both genders, and then separately by gender.

State and sub-round dummies were included as controls in both estimations, but the coefficients are not reported.

Table A1 in the appendix provides descriptive statistics on all the variables for the pooled sample. We do not provide descriptives round-wise as they are available from reported NSSO tabulations.

IV
Findings

Table 2 reports the results for both the probit model, and the tobit specification on time spent unemployed, for all respondents between the ages of 15 and 59, and Tables 3 and 4 follow for males and females in that age group respectively. For both specifications, the marginal coefficients are reported.

These specifications are reduced forms and do not separately identify the demand-side factors as distinct from reservation wage impacts on the supply side. The probit specifications are for the extreme case of respondents unable to find any work during the reference week even though seeking work. Time spent unemployed is estimated over the larger set of those with varying degrees of unemployment.

In what follows, the baseline coefficients will first be dealt with, before looking at the change going from the 55th to the 61st rounds.

In both specifications, the same pattern of coefficients shows up for individual characteristics such as age, square of age, the dummy for males, and for the married state. Unemployment is higher for males relative to females, and lower for married respondents. The coefficient for age is positive and significant, and for age squared negative and significant, showing a penalty for age that increases at a diminishing rate.[6]

The results for education across both genders consistently show lower unemployment with literacy going up to initial schooling, and higher unemployment at higher education levels, with variation by gender in terms of whether the change in sign occurs at secondary or higher secondary level. The lower unemployment with education up to primary school is most likely reflective of other correlates of schooling (such as perhaps higher health status of respondents with some schooling) rather than the need for literacy skills on the job. The higher unemployment among those with higher schooling is consistent with the reservation wage effect.

By household characteristics, the negative coefficient for household size is consistent with the negative coefficient for marital status, as marriage increases household size. This suggests increased pressure to work in order to support bigger households. There is a positive coefficient for age of head of household. Per capita land (possessed) is negative and significant, because own land offers continual work opportunities. Respondents from households where at least one member had secondary school or higher education have a lower probability of unemployment, and spend less time unemployed. This is a very important finding, reflecting as it does the importance of family networks in accessing jobs. It explains the political pressure for caste-based quotas in education and jobs. The (unweighted) data used for this paper show that the percentage of individuals living in a household in 2004-05 with at least one member with a secondary school or higher education is 36.61 per cent among SC respondents; 33.97 per cent among STs; 45.63 per cent among OBCs; much lower than the 58.07 per cent among the reference group.[7]

Table 4: Rural India: Females (Ages 15-59)

Baseline	Prob of being Unemp on All Days (Unemp=1) Marginal Effects	Time Spent Un-employed Marginal Effects
Individual characteristics		
Demographic		
Age	0.0008*	0.0076*
Square of age	-0.00001*	-0.00013*
D: Married	-0.008*	-0.076*
Education (reference group: Illiterate)		
D: Below primary but literate	-0.002*	-0.027*
D: Primary schooling	-0.002*	-0.032*
D: Middle schooling	-0.001***	-0.032*
D: Secondary schooling	0.007*	0.015***
D: Higher secondary schooling and above	0.028*	0.152*
Household characteristics		
Per capita land possessed	-0.00007*	-0.0012*
Household size	-0.00012**	-0.0027*
Age of household head	0.00007*	0.0007*
D: At least one household member with at least secondary education	-0.002*	-0.027*
(Reference group: Households from other social groups)		
D: Scheduled caste household	0.001	0.033*
D: Scheduled tribe household	0.002*	0.05*
D: Other backward caste household	0.001**	0.008**
(Reference group: Households from other religions)		
D: Muslim household	-0.001**	-0.016*
61st round (2004-2005) incremental effects		
D: 61	0.0015**	0.021*
D: 61 x D: Below primary but literate	0.0004	0.008
D: 61 x D: Primary schooling	0.0003	0.007
D: 61 x D: Middle schooling	0.0008	0.008
D: 61 x D: Secondary schooling	-0.0001	-0.0002
D: 61 x D: Higher secondary schooling and above	-0.0001	-0.0007
D: 61 x per capita land possessed	0.000003	0.00002
D: 61 x D: At least one household member with at least secondary education	0.001	0.007
D: 61 x D: Scheduled caste household	-0.00002	-0.005
D: 61 x D: Scheduled tribe household	0.0003	-0.005
D: 61 x D: Other backward caste household	-0.0003	0.004
D: 61 x D: Muslim household	-0.0004	-0.010***
Number of observations	215552	217507

Notes: * Represents significance at 1 per cent, ** at 5 per cent and *** at 10 per cent.
Excluded from the table and included in the estimation: dummies for sub-rounds and state level dummies Robust estimation. For probit estimates, clustering was done at the household level.

For all disadvantaged groups, there is higher unemployment content in the reference week. The positive coefficients for these groups hold for both genders, with two exceptions (other backward caste males do not have higher unemployment, and Muslim females have significantly lower unemployment). These are incremental coefficients for membership in these groups, all else held constant, and reflect systematic disadvantages for these social groups. Scheduled tribes have the highest coefficient for time spent unemployed among both males and females.

Incremental effects: The intercept dummy for the 61st round is positive and significant in both specifications, showing a rise for all respondents in probability of unemployment as well as time spent unemployed. But there is a reduction in both for males, relative to females. (In conjunction with the positive intercept dummy, this means that the rise in unemployment in the 61st round was lower for males than for females.) Separate estimation for males alone (Table 3), shows reduced unemployment only among males with secondary or higher schooling (relative to the reference group, which is illiterate males). For males with up to primary schooling, on the other hand, unemployment in the 61st round data was actually higher (once again, relative to the reference group). For females (Table 4), there are no changes at all by education level. There is also a decline in unemployment with respect to per capita land possessed for

males, though not for females. There is no change in the coefficient for respondents from households with at least one secondary-schooled member.

This is persuasive but not conclusive evidence that the pattern of rural demand for skills has ramped up for males with secondary and higher levels of formal schooling, though not for males at the low end of the schooling spectrum, and not for females.

But the overall rise in unemployment as reflected by the intercept dummy is a bit of a puzzle, seen in conjunction with the rise in monthly per capita rural expenditure between the two rounds.[8] There has been some rise in the time spent unemployed even for males with more than secondary school education. But since this increase is lower than that for less educated males, there is a changing composition of the employed labour force in favour of the more educated. This, in conjunction with the rise in the proportion of males with at least secondary schooling from 19.7 to 31 per cent[9] suggests one possible answer to the puzzle.[10] If this is so, a testable hypothesis (not tested in this paper) is that the pattern of rural prosperity would conform closely to the pattern of availability of rural schools.

For social groups, the only change in the 61st round is the negative coefficient for SC males, and for Muslim males and females, thus suggesting a reduction of the systematic disadvantage for these two groups. There is however no change for

Table A1: Summary Statistics

Variable Name	Description	Mean	Standard Deviation
D_Unemp	D_Unemp = 1 if individual not working (daily status 81) during any of the 7 reference days, = 0 if not in the labour force OR employed	0.02	0.14
time_spent_unemp	Time spent unemployed in the 7 days of the reference days	0.23	1.13
Age	Age of the individual	32.26	11.99
Square of age	Square of age of the individual	1184.73	841.16
D: Male	1 if Individual is a male, 0 if female	0.50	0.50
D: Married	1 if the individual is married, 0 otherwise	0.71	0.46
D: Below primary but literate	1 if individual is literate but has less than primary schooling, 0 otherwise	0.09	0.29
D: Primary schooling	1 if individual's highest education level is primary schooling, 0 otherwise	0.13	0.34
D: Middle schooling	1 if individual highest education level is middle school, 0 otherwise	0.18	0.38
D: Secondary schooling	1 if individual's highest education level is secondary schooling, 0 otherwise	0.11	0.31
D: Higher secondary schooling and above	1 if individual has at least higher secondary schooling, 0 otherwise	0.10	0.30
Per capita land possessed	Total land possessed by the household/household size	21.71	46.53
Household size	Size of the household	6.21	3.19
Age of household head	Age of the head of the household	47.18	12.72
D: At least one household member with at least secondary education	1 if at least one household member has passed secondary school, 0 otherwise	0.43	0.49
D: Scheduled caste household	1 if individual is from a scheduled caste household, 0 otherwise	0.15	0.36
D: Scheduled tribe household	1 if individual is from a scheduled tribe household, 0 otherwise	0.17	0.37
D: Other backward caste household	1 if individual is from a 'other backward classes' household, 0 otherwise	0.37	0.48
D: Muslim household	1 if individual is from a Muslim household, 0 otherwise	0.11	0.31
D: 61	1 if data belongs to 2004-2005, 0 if it belongs to 1999-2000	0.52	0.50
D: 61 X D: Male	.	0.26	0.44
D: 61 X D: Below primary but literate	.	0.04	0.21
D: 61 X D: Primary schooling	.	0.08	0.26
D: 61 X D: Middle schooling	.	0.10	0.30
D: 61 X D: Secondary schooling	.	0.06	0.24
D: 61 X D: Higher secondary schooling and above	.	0.06	0.24
D: 61 X Per capita land possessed	.	11.02	32.60
D:61 X D: At least one household member with at least secondary education	.	0.24	0.43
D: 61 X D: Scheduled caste household	.	0.08	0.27
D: 61 X D: Scheduled tribe household	.	0.09	0.28
D: 61 X D: Other backward caste household	.	0.20	0.40
D: 61 X D: Muslim household	.	0.06	0.24

scheduled tribes, who have the highest coefficient for time spent unemployed among both males and females.

V
Conclusions

Four conclusions emerge from the pooled investigation in this paper of the change in rural unemployment between 1999-2000 and 2004-05.

The first is confirmation of the evidence from the initial tabulations provided by the NSS, of an overall rise in rural unemployment in 2004-05 relative to 1999-2000, in terms of both total and partial failure to find work during the reference week, between the 55th and 61st rounds.

Second, the pattern of change shows a decline in unemployment among males with secondary school or higher education, relative to the reference group which is illiterate males. This suggests that the rise in rural prosperity reflected in the rise in monthly per capita rural expenditure between the two rounds might closely match employment availability for rural males with more than elementary schooling, and might also be the outcome of the higher percentage of males with such educational attainment. At the same time, there is higher unemployment at the low end of the education spectrum, for literate males with some education up to primary level, relative to illiterate males. This pattern by education level is not visible for females at all.

Third, the negative and significant impact on unemployment of belonging to households with at least one member with a secondary school or higher education remains unchanged, showing the continued importance of networks in securing employment. Putting this together with the apparent evidence on higher employment in rural locations for those with secondary schooling (relative to the less educated), the rise in rural prosperity is probably clustered by both household and region. This network impact also explains the political pressure for caste-based quotas in access to both education and jobs.

Fourth, of the four social groups for whom the incremental coefficient for time spent unemployed serves as an indicator of systematic disadvantage, the highest coefficient is found for scheduled tribes. This survives unchanged into the 61st round, and is an important pointer to the required regional configuration of workfare programmes like National Rural Employment Guarantee Scheme (NREGS), and even more importantly for the spread of rural schools. There are no changes among the three other social groups with two exceptions. There is reduced unemployment among SC males, and among Muslim males and females, with the incremental effect more than equal and opposite in sign to the initial coefficient. Thus by 2004-05 these groups had achieved more than parity with the reference mainstream group. EPW

Email: indira_raja@yahoo.com

Notes

1 The previous five were in rounds 27 (1972-73), 32 (1977-78), 38 (January-December 1983), 43 (1987-88) and 50 (1993-94).
2 Respondents in these surveys are given a unique status for a period longer than a day on the basis of the activity pursued on the majority of days during that period, the reference week, or reference year for "usual" status.
3 The usual status coding has a single provision, code 81, which combines the two.

4 The overall rural average monthly per capita consumption expenditure rose from Rs 486.16 in 1999-2000 to Rs 558.78 in 2004-05, a nominal rise of 14.94 per cent, as against a rise in the Consumer Price Index for Agricultural Labourers over the same period of 10.68 per cent [NSSO 2006b, table p 6].
5 The NSS tabulations are for ages 15 and above, with no age ceiling.
6 Similar to Murgai and Ravallion 2005a and 2005b, although their coefficient for the square of age in the 55th round is positive as well. Their estimation was confined to the 15 major states, and was therefore conducted for a slightly different pool, regionally at any rate. An exercise conducted here for the casual labour force alone, on the other hand, showed a negative and significant coefficient for age, positive for age squared. Thus in the hired labour market, practice and experience reduce the probability of unemployment, until age reduces physical strength [Rajaraman and Mukhopadhyay 2005]. There is also the same pattern by age in the wage functions for casual labour estimated in Rajaraman, 1986.
7 All the estimations in this paper are on the unweighted data, since no attempt was made to calculated summary statistics valid for the whole country. These percentages have to be used with that caveat in mind.
8 The rise is only of the order of 4 per cent over the entire five-year period; see footnote 4.
9 NSSO, 2001, Appendix Table 6 for the 55th round NSSO, 2006c, Statement 3.8, p 25 for the 61st round. Both estimates are for age 15 and above, and do not cut off those above 59, as the exercise reported in this paper does. The NSS estimates are weighted by the survey multipliers.
10 There may also be other additional explanations to this puzzle. For example rising real wages may more than compensate for the rise in probability of unemployment. This is a subject of our ongoing research.

References

Gravel, Nicolas and Abhiroop Mukhopadhyay (2007): 'Is India Better Off Now Than Fifteen Years Ago? A Robust Multidimensional Answer', Centre de Sciences et Humaine Working Paper, Delhi; forthcoming.

Murgai, Rinku and Martin Ravallion (2005a): 'Is a Guaranteed Living Wage a Good Anti-Poverty Policy?' Development Research Group, World Bank (mimeo; May).

– (2005b): 'An Employment Guarantee in Rural India: What Would it Cost and How Much Would it Reduce Poverty?' *Economic and Political Weekly*, XL:31; 3450-55.

National Sample Survey Organisation (2001a): 'Employment and Unemployment Situation in India 1999-2000: Part-I', NSS 55th Round, Report No 458 (September), Government of India.

– (2001b): 'Literacy and Levels of Education in India 1999-2000', NSS 55th Round, Report No 473 (September), Government of India.

– (2006a): 'Employment and Unemployment Situation in India 2004-2005', NSS 61st Round, Report No 515-16 (September-October), Government of India.

– (2006b): 'Level and Pattern of Consumer Expenditure, 2004-2005', NSS 61st Round, Report No 508 (December), Government of India.

– (2006c): 'Status of Education and Vocational Training in India 2004-05', Report No 517 (December), Government of India.

Rajaraman, Indira (1986): 'Offered Wage and Recipient Attribute: Wage Functions for Rural Labour in India', *Journal of Development Economics*, 24:1; pp 179-195.

Rajaraman, Indira and Abhiroop Mukhopadhyay (2005): 'Daily Labour Status Transitions in Rural India' (mimeo; December).