RESEARCH ARTICLE

Features of Rural Underemployment in India: Evidence from Nine Villages

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with
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Abstract: This paper examines aspects of the employment available to manual workers in rural India, using household-level data collected in nine villages in four States of India. In particular, it examines the social and gender composition of the labour force, and the extent of underemployment among manual workers. The results show that most Dalit and Adivasi workers in the villages were dependent on earnings from manual work. The number of days of employment – agricultural and non-agricultural – received by manual workers was very low. Women were confined to agricultural work, and to work within villages of residence. The paper also computes the number of days of work that would be necessary (at current wage rates) to ensure that households are able to reach minimal official poverty-line levels of earnings.

Keywords: Rural employment in India, caste and employment, gender and employment, rural underemployment, poverty and rural employment.

Introduction

The number of days of employment available to a rural worker is a critical measure of unemployment in rural India.[1] It is well-established that in the rural economy of a less-developed country, the labour market is dominated by casual labour – time-rated or piece-rated – with no assurance or security of employment, and that the status of employment of a worker is characterised not by zero employment but by large stretches of time in the year when he or she is unable to obtain any work.

Most recent studies of rural employment in India based on primary data indicate very low levels of employment among both men and women workers, with a decline over

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[1] For an argument on the importance of the number of days of employment available to a worker as a measure of employment, see Dhar (2012b).

time in the magnitude of employment in many cases.[2] Ramakumar (2004) reported that in Morazha village in Kerala, in 2001, women workers received between 51 and 110 days of employment, and men obtained between 69 and 145 days of employment (cited in Ramachandran and Swaminathan 2006). Mehta (2006) reported that the average number of days of employment obtained by a worker varied from 90 days to 112 days in the villages she surveyed in Gujarat in 2003–04. From a survey in 2003-4 of two villages in Haryana, namely Dhamar and Birdhana, Rawal (2006) reported that women workers received only 44 days and 46 days of work, and male workers 103 days and 102 days of work in the respective villages. In three villages of Andhra Pradesh, the average duration of employment in 2005–06 was found to be of the order of 90 to 100 days per worker, that is, around three months in the year (see Ramachandran, Rawal and Swaminathan eds. 2010, Ch. 7). Ramakumar and Raut (2011) reported that agricultural workers in Dongargaon, a cotton-growing village of Maharashtra, received, on average, employment for about 111 days in 2006–07.

The main official source of data on rural labour households in India is the Rural Labour Enquiry (RLE). Although there are serious problems in the methodology of the RLE, whose estimates tend to overstate the number of days of employment, even the RLE shows a decline in the availability of rural employment in recent years.[3] According to RLE estimates, the number of days of employment obtained by a male wage worker in a rural labour household declined from 235 days in 1993–94 to 213 days in 2004–05. For a female wage worker in the same period, the number of days of employment declined from 203 days to 176 days.

As important as the present low levels of rural employment as an indicator of the unemployment crisis is the fact that the prospects for market-driven employment generation in Indian agriculture are bleak, given current economic policies and the present path of development. Among the (overlapping) factors discussed by Ramachandran and Swaminathan (2006) in this regard are the decline in labour absorption in rice and wheat production; the secular decline in public investment in rural areas, particularly in minor, medium and major irrigation projects; the decline in market-generated non-agricultural employment; changes in the pattern of land ownership; post-liberalisation rural credit policy; the distress-driven practice of leaving land fallow; the decline of extension and agricultural information services; and changes in land use and cropping patterns.[4] In addition, the reserve army of

[2] See, for example, Ramakumar (2004); Mehta (2006); Ramachandran and Swaminathan (2006); Rawal (2006); Ramachandran, Rawal, and Swaminathan (2010); and Ramakumar and Raut (2011).

[3] See Dhar (2012b) for a critical review of the methodology used by the Rural Labour Enquiry to calculate the number of days of employment available to rural workers.

[4] On deflationary policies with respect to the countryside, see Patnaik (2004), and Chandrasekhar and Ghosh (2002).

labour has grown, with increased participation of the now-impoverished peasantry in the wage-labour market.[5]

This article discusses the employment of manual workers in nine villages in four States of India. The villages were studied and surveyed as a part of the Project on Agrarian Relations in India (PARI) of the Foundation for Agrarian Studies. The objectives of the article are two-fold. First, it attempts to document what are clearly very low levels of employment among manual workers working in diverse agro-ecological conditions. Secondly, it attempts to highlight certain important features of employment and unemployment among households dependent on wage labour.

Database

The data on which this article is based come from village surveys undertaken by the Foundation for Agrarian Studies as part of its Project on Agrarian Relations in India (PARI). Data for this article come from three villages in Andhra Pradesh, two villages in Uttar Pradesh, two villages in Maharashtra, and two villages in Rajasthan. The village were surveyed between 2005 and 2010 (Table A1). A brief description of the surveyed villages follows.[6]

The Study Villages

Andhra Pradesh

The three villages surveyed in 2005–06 in Andhra Pradesh were Ananthavaram in Guntur district, Bukkacherla in Anantapur district, and Kothapalle in Karimnagar district. Ananthavaram, situated in the paddy-growing region of Guntur district, had been surveyed by P. Sundarayya in 1974 and was purposively selected for a re-survey in 2005-06. Bukkacherla is situated in the scarce-rainfall zone of Rayalaseema. It is in Raptadu mandal in the dry and drought-prone district of Anantapur.[7] Kothapalle village is part of the groundwater-irrigated, multi-crop region of the North Telangana zone. It is located in Thimmapur (Lower Maner Dam Colony) mandal, Karimnagar district.

Uttar Pradesh

Two villages were surveyed in Uttar Pradesh in 2005–06: Harevli in Bijnor district and Mahatwar in Ballia district. Harevli is a canal-irrigated, wheat-growing village, and Mahatwar is situated in the groundwater-irrigated, wheat- and paddy-growing belt of eastern Uttar Pradesh.

[5] For case studies from Andhra Pradesh in this regard, see the discussion in Ramachandran, Rawal, and Swaminathan (2010), and Dhar (2012a).
[6] Details taken from www.fas.org.in.
[7] A mandal is a unit of sub-district administration in Andhra Pradesh.

Maharashtra

The two villages studied in Maharashtra in 2006–07, Nimshirgaon in Kolhapur district and Warwat Khanderao in Buldhana district, were parts of distinct agricultural systems. In Nimshirgaon, the cultivation of high-value irrigated crops – such as banana, grape, sorghum, soyabean, sugarcane, and vegetables – dominated; in Warwat Khanderao, the main crops were unirrigated cotton, along with unirrigated pulses, jowar, etc.

Rajasthan

The two villages studied in Rajasthan were 25 F Gulabewala in Sri Ganganagar district, surveyed in 2007, and Rewasi in Sikar district, surveyed in 2010. The main crops cultivated in 25 F Gulabewala, situated in an area irrigated by the Gang Canal project, were wheat, rapeseed, cotton, cluster beans, and fodder crops. In Rewasi, unirrigated pearl millet was the most important crop of the kharif season, and the major rabi crops were wheat, mustard, onions, and fenugreek. Tubewells were used for irrigating rabi crops.

Methodology

Data on employment and incomes of workers were collected on the basis of sample surveys from the three villages in Andhra Pradesh (Ananthavaram, Bukkacherla, and Kothapalle) and one village in Maharashtra (Nimshirgaon), and through census-type surveys from the other study villages.

The analysis in this article applies only to hired manual worker households in the study villages. Although the major share of the incomes of such households came from hired manual work, they did have other sources of livelihood. Apart from earnings from agricultural and non-agricultural wage labour, the other sources of income for hired manual workers in the study villages, as reported by Ramachandran, Rawal, and Swaminathan (2010), were: crop production, animal resources, salaries, business and trade, rent, interest earnings, pensions, remittances, and scholarships.

The PARI village surveys collected data on the number of days of employment for each worker who performed any wage-work in crop production. These data were collected on a disaggregated basis, that is, by season, then by crop, and finally by crop operation. The surveys also collected information on the number of hours of work on each working day. Information was collected on hours of work and the number of days of employment for non-agricultural wage workers. The calculation here of the total number of days of employment does not include the number days of self-employed activity. All labour-days have been standardised to an eight-hour day. The numbers of labour-days of monthly-paid workers and of long-term workers have also been excluded from the calculation of the total number of days of employment.

Hired Manual Worker Households in Village Populations

In almost all the study villages, the class of hired manual workers was the single largest class of households.

Andhra Pradesh[8]

Hired manual worker households constituted 20 per cent of all households in Bukkacherla, 25 per cent in Ananthavaram, and 42 per cent in Kothapalle. On average, there were around two manual workers per household in all three villages (ranging from 1.9 in Kothapalle to 2.2 in Ananthavaram).

Uttar Pradesh

Hired manual worker households constituted 24 per cent of all households in Harevli and 23 per cent of all households in Mahatwar. In Harevli, the average number of manual workers per household was 2.3, and in Mahatwar the average number of manual workers per household was 2.2.

Maharashtra

In Nimshirgaon, hired manual worker households constituted 39 per cent of all households in the village. In Warwat Khanderao, 30 per cent of all households belonged to the class of hired manual workers.[9] The number of manual workers per household was, on average, 1.8 in Nimshirgaon and 2.5 in Warwat Khanderao.

Table 1 *Number of households and workers per household, hired manual worker households, study villages, 2006–10*

State	Village	Hired manual worker households		No. of workers per household
		No.	% of all households	
Andhra Pradesh	Ananthavaram	164	25	2.2
	Bukkacherla	59	20	2.0
	Kothapalle	155	42	1.9
Uttar Pradesh	Harevli	26	24	2.3
	Mahatwar	36	23	2.2
Maharastra	Nimshirgaon	299	39	1.8
	Warwat Khanderao	76	30	2.5
Rajasthan	25 F Gulabewala	114	56	2.9
	Rewasi	39	18	1.5

Source: PARI survey data.

[8] This section on Andhra Pradesh appears in Chapter 7 of Ramachandran, Rawal, and Swaminathan (2010).
[9] In 2006–07, there were 11 workers in Warwat Khanderao employed as long-term workers in agriculture and allied activities.

In Nimshirgaon, in addition to considering the class of hired manual workers, we have also considered a subset of this class – which we call manual workers with significant non-agricultural work – where we consider male-female differentials in employment.

In Warwat Khanderao, manual workers were classified either as worker households with significant cultivation activities (the average size of land holding among such households was 2.45 acres) or as other hired manual workers.

Rajasthan

In 25 F Gulabewala, almost 56 per cent of all households earned the major share of their incomes from wage employment.[10] Another remarkable feature of the manual worker households in this village was the relatively large number of workers, almost three workers per household, engaged in manual labour in each household. The class of hired manual workers in Rewasi constituted 18 per cent of all households the smallest proportion of all the villages studied.

The 2010 PARI survey of Rewasi in Rajasthan found that two important sources of income in the village were animal resources and remittances from migrant workers. The incidence of migration (both internal and international) was very high: around 109 workers from the village had migrated to different parts of India as well as to countries of the Persian Gulf to perform skilled and unskilled labour. Of these migrant workers, 21 workers were from manual worker households, and most of them were skilled workers (Ramachandran 2012).

Manual Worker Households: Caste Composition

For each village, we considered four indicators:

1. The number of households in each caste as a proportion of all households
2. The number of manual worker households in each caste as a proportion of all hired manual worker households
3. For each caste, the number of manual worker households in the caste as a proportion of all households in the caste

[10] Of these 114 households in the hired manual worker class, in 50 households, one or more than one member of the household was working as a long-term worker in agricultural and allied activities. In 2007, there were 74 long-term workers (63 men and 11 women) in the village. Female workers were employed on fixed wages. Of all the male workers, six were employed on a share-wage basis and the rest were employed on fixed annual wage contracts. The fixed contracts were mainly for 10–12 months in a year. Under share-wage contracts, workers and their families who worked on the employer's land received one-fourth of produce, and the wages for hired workers utilised in specific crop production on the same plot of land were paid from the long-term workers' share. The main activities of long-term male workers were performing agricultural tasks, operating machines, and tending the employer's animals. Female workers performed the tasks of cleaning house premises and cattle-sheds.

4. The ratio of (2) to (3) above. This ratio expresses the proportional representation of each caste in the class of manual workers. In other words, if the ratio of (2) to (3) is 1, it means that the representation of the caste in the class is exactly proportional to its representation in the population. If it is greater than 1, the caste is more than proportionally represented in the class of manual workers.

In study villages, Dalit and Adivasi households were the largest constituents of the class of hired manual workers. The number of Dalit manual worker households as a proportion of all hired manual worker households ranged from 21 per cent in Warwat Khanderao to 97 per cent in 25 F Gulabewala. In five out of nine villages, the number of Dalit manual worker households as a proportion of all hired manual worker households was more than 50 per cent.

Indicator (3) suggests that the number of manual worker households among Adivasi and Dalit households as a proportion of all households in the same caste was substantially higher than among other caste groups. The proportion of Dalit households belonging to the class of hired manual workers ranged from 34 per cent in Ananthavaram to 91 per cent in 25 F Gulabewala. Adivasi households constituted a significant proportion of hired manual worker households in five of the study villages – Ananthavaram, Kothapalle, Nimshirgaon, Warwat Khanderao, and Rewasi – even

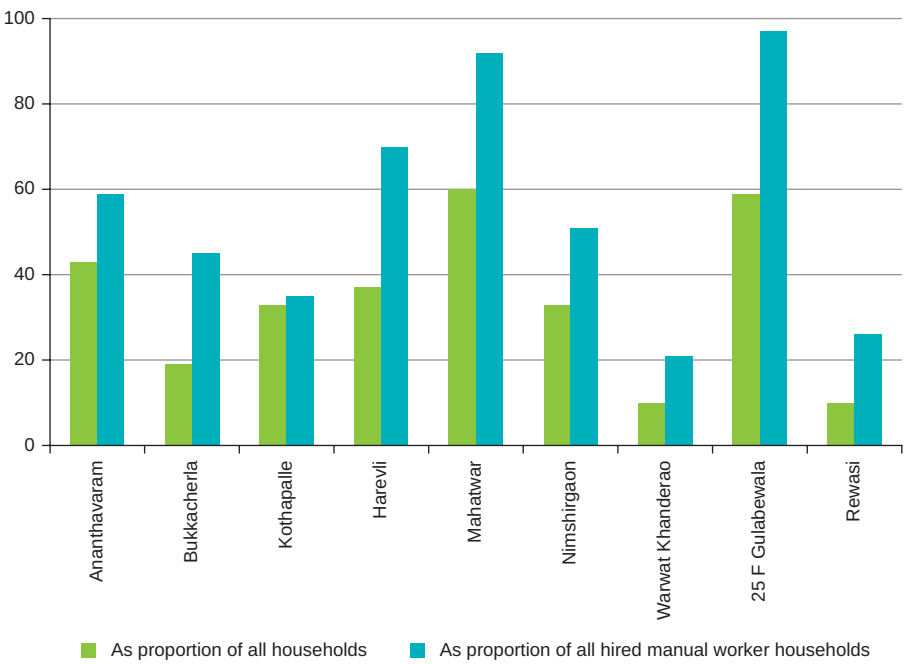

Figure 1 *Number of Dalit households as a proportion of all households and of hired manual worker households, study villages, 2006–10*
Source: PARI survey data.

though they were numerically a small group within the total population of these villages. The proportion of hired manual workers among Adivasi households was substantially higher than among other caste groups. In Kothapalle, for example, 99 per cent of Adivasi households were hired manual worker households; the corresponding proportion in Ananthavaram was 80 per cent.

Indicator (4) states the proportional representation of each caste in the class of manual workers. Of the nine study villages, in five villages – Bukkacherla, Harevli, 25 F Gulabewala, Nimshirgaon, and Mahatwar – the ratio of (2) to (3) was 1.5 or more. In the other four villages – Ananthavaram, Kothapalle, Warwat Khanderao, and Rewasi – this ratio ranged between 1 and 1.5.

The number of Other Caste household manual workers as a proportion of all manual worker households was relatively low. In Harevli, Mahatwar, and 25 F Gulabewala, there was no Other Caste household classified as a manual worker household. Significant sections of Other Backward Class households were classified as manual worker households, particularly in Bukkacherla, Kothapalle, Harevli, and Warwat Khanderao. In Kothapalle 52 per cent of Other Backward Class households were classified as manual worker households.

To summarise, in all nine villages, the share of Dalit households in the class of hired manual workers was invariably higher than their representation in the population. A significant proportion of Adivasi and nomadic tribe households (in Ananthavaram, Kothapalle, and Nimshirgaon) and Other Backward Class households (in Kothapalle, Warwat Khanderao, Bukkacherla, Harevli, and Rewasi) also belonged to the class of hired manual workers.

Wage Employment

Andhra Pradesh

In all the study villages, the working year of manual workers, male and female, was characterised by very low levels of employment. The average number of days of employment obtained by a worker in a year was 90 to 100 days, that is, around three months. This average was highest in Bukkacherla (104 days). Men received more days of employment than women in Ananthavaram (106 days and 65 days respectively) and Bukkacherla (132 days and 80 days respectively).[11] A study of two other villages in the State, Aurepalle and Dokur in Mahbubnagar district (Rao and Charyulu 2007), depicted a similar pattern, with men obtaining more days of employment than female workers. This pattern was reversed in Kothapalle, where

[11] We have two-point data for Ananthavaram, which was surveyed by P. Sundarayya in 1974. In 1974, the average number of days of employment available to men and women belonging to agricultural labour families was 150 days and 75 days respectively (Sundarayya 1977). The PARI survey of 2005–06 showed fewer days of employment than in 1974.

Table 2 *Average number of days of wage employment per worker, by sex, Andhra Pradesh villages, 2005–06*

	Ananthavaram	Bukkacherla	Kothapalle
Male workers	106	132	83
Female workers	65	80	93
All workers	90	104	89

Source: PARI survey data.

Table 3 *Average number of days of wage employment per worker, by sex, Uttar Pradesh villages, 2005–06*

	Harevli	Mahatwar
Male workers	146	185
Female workers	108	66
All workers	130	136

Source: PARI survey data.

the PARI survey found that women workers received 93 days and men 83 days of paid employment in 2005–06.

Uttar Pradesh

The average number of days of employment received by a manual worker in the two Uttar Pradesh villages, Harevli and Mahatwar, was 130 and 136 respectively. In Harevli, on average, a male worker received 146 days of wage employment and a female worker 108 days of employment. Agriculture was the major source of employment for male and female workers. In Mahatwar, on average, a male worker received 185 days of employment in wage work, while a female worker received only 66 days of employment.

Maharashtra

In Nimshirgaon in Maharashtra, a manual worker received 121 days of wage employment in the reference year. A male worker from a manual worker household with significant non-agricultural work received, on average, 141 days of wage employment, while a female worker from the same category of households received, on average, only 89 days of wage employment.

In Warwat Khanderao (Table 4B), on average, a manual worker received 102 days of wage employment in the reference year. Although there was very little difference between the average number of days of employment received by male and female workers, there was, predictably, a substantial difference between the number of days of employment obtained by workers from hired manual worker households

Table 4A *Average number of days of wage employment per worker, by sex, Nimshirgaon, Maharashtra, 2006–07*

	Male workers	Female workers	All workers
Hired manual worker households with significant non-agricultural work	141	89	122
Hired manual worker households	121	120	121

Source: PARI survey data.

Table 4B *Average number of days of wage employment per worker, by sex, Warwat Khanderao, 2006–07*

	Male workers	Female workers	All workers
Hired manual worker households with significant agricultural activity	83	93	88
Other hired manual worker households	115	106	110
Hired manual worker households	105	101	102

Source: PARI survey data.

with operational holdings of land and significant agricultural activity and from other hired manual worker households. Male workers from other hired manual worker households received 32 more days of employment, on average, than male workers from hired manual worker households with significant agricultural activity. Female workers from other hired manual worker households received 13 more days of employment than female workers from hired manual worker households with significant agricultural activity. This is because manual workers in households with significant agricultural activity were engaged in self-employment for a larger part of the year than other manual workers.

Rajasthan

In 25 F Gulabewala, on average, a male worker received 141 days of wage employment and a female worker received 67 days of wage employment in the reference year. In Rewasi, in 2009-10, a male worker received an average of 105 days of wage employment and a female worker received 73 days of wage employment. If the number of days of work received under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is excluded from the total number of days of employment, a male worker in Rewasi received only 84 days of wage employment and a female worker merely 21 days in the reference year.

To sum up, the village data showed that, in general, male workers received less than six months of wage employment in a year (the highest average was in Mahatwar, where a male worker received, on average, 185 days of employment in a year). The situation of female workers was much worse. Other than in Nimshirgaon in

Table 5 *Average number of days of wage employment per worker, by sex, Rajasthan villages*

	Male workers	Female workers	All workers
25 F Gulabewala, 2006-7	141	67	98
Rewasi*, 2009-10	105	73	95
Rewasi (without MGNREGA), 2009-10	84	21	63

Note: *Reported number of days of employment includes recorded number of days of work received by male and female workers, according to job cards, under MGNREGA.
Source: PARI survey data.

Maharashtra, female workers received less than four months of wage employment in a year in all the study villages. Thus, the extent of underemployment among workers, especially female workers, was striking in all the study villages.

An important feature of the male-female differential in the number of days of employment was that female workers were generally confined to the agricultural sector, while men found more employment in non-agricultural activities than women did.

Distribution of Employment

Figure 2 shows that, in almost all the study villages, a large proportion of workers belonging to hired manual worker households received less than three months of wage employment in a year, with just a small proportion of workers receiving employment for more than six months. The distribution of the number of days of employment clearly points to pervasive underemployment among rural workers belonging to the class of hired manual workers, and raises questions about the reliance of policy makers on a simple mean or average.

The variations across workers in the study villages in terms of the number of days of employment received are in Table 6. Detailed tables of distribution of the number of days of employment are given in Appendix Tables A8 to A11.

Andhra Pradesh

Most workers in manual worker households in the study villages of Andhra Pradesh were employed for less than six months in a year: almost 62 per cent of the workers in Ananthavaram and Kothapalle obtained employment for less than three months in a year, and only around 12 per cent of workers received more than 180 days of employment in a year in all three villages.

Uttar Pradesh

In Harevli, 38 per cent of workers received less than three months of paid employment, while only 28 per cent received employment for more than six

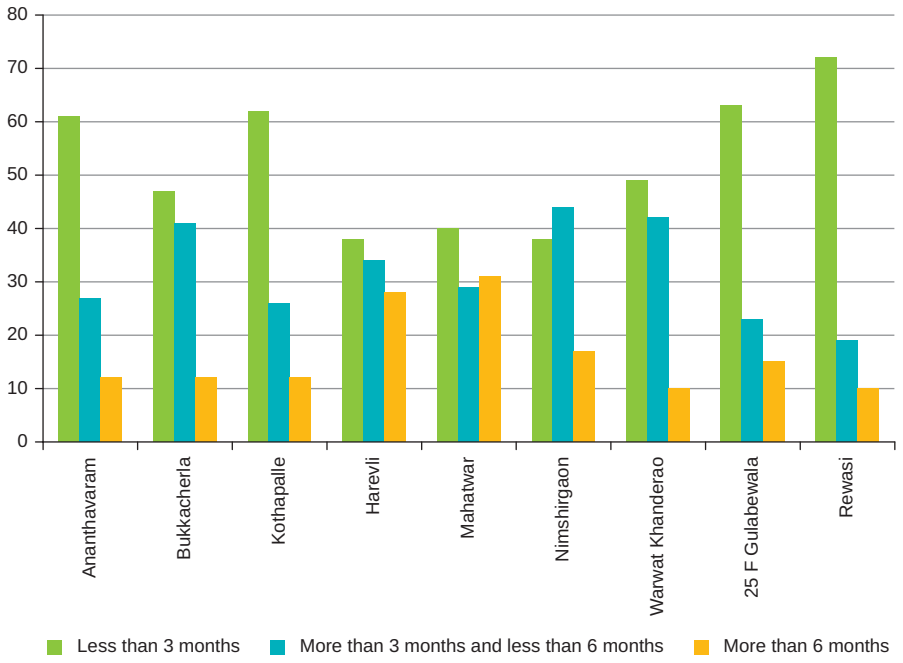

Figure 2 *Distribution of hired manual workers, by size-class of number of days of employment, study villages, 2005–10*

Source: PARI survey data.

Table 6 *Manual workers as a proportion of all manual workers (male and female) who received employment for less than half the year, study villages* in per cent

Village, region, State	%
Ananthavaram, South coastal Andhra Pradesh, 2005-6	88
Bukkacherla, Rayalaseema, Andhra Pradesh, 2005-6	88
Kothapalle, North Telangana, Andhra Pradesh, 2005-6	88
Harevli, Upper Gangetic Plains, Uttar Pradesh, 2005-6	72
Mahatwar, Middle Gangetic Plains, Uttar Pradesh, 2005-6	69
Nimshirgaon, Western Hills, Maharashtra, 2006-7	82
Warwat Khanderao, Western Plateau, Maharashtra, 2006-7	91
25 F Gulabewala, Trans-Gangetic Plains (arid), Rajasthan, 2006-7	86
Rewasi, Central Plateau and Hills, Rajasthan, 2009-10	91

Note: For more detailed information, see Appendix Table A8 to A11.
Source: PARI survey data.

months. In Mahatwar, almost 40 per cent of workers received employment for less than three months and 31 per cent received employment for more than six months (the highest among all the study villages). Most women received less than 60 days of employment in a year (see Appendix Table A9).

Maharashtra

In Nimshirgaon, 28 per cent of workers of hired manual worker households received employment for less than two months in a year. At the other end of the distribution, 17 per cent of workers belonging to hired manual worker households with significant non-agricultural work received employment for more than six months each (see Appendix Table A10.1).

In Warwat Khanderao, of all workers, 49 per cent received employment for less than three months and merely 10 per cent received employment for more than six months. A substantial proportion of workers – almost 42 per cent – received employment for two to five months.

Rajasthan

Both villages in Rajasthan showed skewed distribution of workers by size-class of number of days of employment. In 25 F Gulabewala, 63 per cent of workers received employment for less than three months. The situation was grimmer in Rewasi, where 72 per cent of workers received employment for less than three months, excluding the number of days of employment reported in MGNREGA job cards. PARI data indicate that in Rewasi, workers received wages for an average of 32 days per worker in the year. In Rewasi, this payment was more or less a transfer payment.

At the other end of the distribution, the data show that few workers received employment for more than six months. The proportion of such workers was 15 per cent in 25 F Gulabewala and only 10 per cent in Rewasi.

Employment in Agricultural and Non-Agricultural Work

At the household level, the "pure agricultural worker household" was non-existent in the study villages, as all households gained incomes from multiple sources; however, as Appendix Tables A4 to A7 show, there was evidence that many agricultural worker households had individual members who worked only at agricultural work. These were mainly women workers. It is evident that male workers, given favourable circumstances, as in Kothapalle, Mahatwar, Rewasi, and Nimshirgaon, began to move out of agricultural work, while women workers continued to toil in agriculture.

Agricultural wage work was the main source of employment for wage workers, particularly women, in the majority of study villages. Women workers in agriculture worked mainly at tasks that were traditionally female-specific agricultural tasks. It is also evident that the cultivation of high-value crops in some of the study villages, which required a large contingent of workers with distinct skills – such as betel-leaf, sugarcane, and turmeric cultivation in Ananthavaram, Andhra Pradesh, and grape, sugarcane, and vegetable cultivation in Nimshirgaon, Maharashtra – had the potential to generate substantial employment. Only in two study villages – Mahatwar

in eastern Uttar Pradesh and Nimshirgaon in western Maharashtra – did the number of days of employment obtained by male workers in non-agricultural wage work exceed the number of days of employment received from agricultural wage work.[12]

Further, the gap in the number of days of employment between male and female workers was largely on account of the higher number of days of employment obtained by male workers in non-agricultural work. A similar pattern was observed by Ramakumar and Raut (2011) in Maharashtra. However, the non-agricultural occupations available to men were not very diverse, and were generally low-skill-based and low-paying, other than in Nimshirgaon.

There was severe underemployment among a large section of female workers in the study villages. Female workers were confined to the agricultural sector in almost all the study villages, with few women workers performing any non-agricultural work. They received less than four months of employment in agriculture.

Andhra Pradesh

Agriculture provided around 65 days of employment for male and for female workers in Ananthavaram, and around 80 days of employment for men and women in Bukkacherla (Table 7). In both villages, workers received more agricultural than non-agricultural work; in fact, women workers in both villages obtained hardly any non-agricultural work at all.

In Kothapalle, a village on a busy state highway, the situation was different. Men received more days of non-agricultural wage work than of agricultural wage work during the reference year. Female workers obtained more days of work in farm activities than in non-farm activities. The higher aggregate number of days of employment among women workers in Kothapalle can probably be explained by the fact that they received work at both farm and non-farm tasks.

Days of Employment in Agricultural Activities

The data on crop cultivation show that the major crops in terms of the scale of employment-generation were paddy, maize, betel-leaf, and sugarcane in Ananthavaram; groundnut intercropped with various pulses and paddy in Bukkacherla; and paddy and maize in Kothapalle.

In Ananthavaram, although sugarcane and betel-leaf were cultivated on only 7.7 per cent of the gross cropped area of the village, they accounted for 44.2 per

[12] The predominance of non-agricultural labour in the annual labour calendar of village-based workers may also characterise another PARI study village, Tehang in Jalandhar district, Punjab, where workers find employment in the nearby urban settlements of Phillaur and Ludhiana. These data, however, are still to be processed.

Table 7 *Average number of days of wage employment obtained by hired manual workers in agricultural and non-agricultural work, by sex, Andhra Pradesh villages, 2005–06* 8-hour days

	Ananthavaram		Bukkacherla		Kothapalle	
	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work
Male workers	65	41	80	52	21	62
Female workers	65	0	79	1	73	20
All workers	65	25	80	24	54	36

Source: PARI survey data.

cent of total labour use (Dhar 2012a). The next most important crop in terms of employment generation was paddy, which was cultivated on 46 per cent of the gross cropped area and accounted for 35 per cent of total labour use (*ibid.*). Thus, highly labour-intensive cultivation of high-value crops combined with extensive cultivation of paddy were the major sources of employment for manual worker households in this village. However, the large size of the wage-labour force (which included wage-workers from manual worker and peasant households) resulted in a low number of days of employment per worker.

The major kharif (monsoon) crop was unirrigated groundnut, and, although the extent of cropped area was substantial and the size of the labour force relatively low, the number of days of employment per worker was low, because of the low labour-absorbing capacity per acre of groundnut.

In Kothapalle, the size of the wage-labour force was large and marked by the near-absence of male workers. This created an opportunity for female workers, who received 73 days of wage employment in various agricultural tasks related to the cultivation of paddy and maize, the two most important crops in terms of gross cropped area.

Days of Employment in Non-agricultural Activities

Among non-agricultural activities, construction work headed the list in terms of employment opportunities available to men in all three villages in the Andhra Pradesh study. As already noted, female participation in non-agricultural tasks was virtually absent, other than in Kothapalle.

Table 8 *Distribution of number of days of non-agricultural employment, by type of activity, Andhra Pradesh villages, 2005–06* in per cent

Type of activity	Ananthavaram	Bukkacherla	Kothapalle
Construction and related activity	36	97	57
Factory work	0.2	0	0
Shop attendant	8	0	0
Tasks related to toddy-tapping	3	0	0
Technicians (motor mechanics, welders, plumbers, etc.)	30	0	5
Transport-related work	3.8	3	8
Work related to rearing animals	19	0	30
Total number of days of non-agricultural employment	100	100	100

Source: PARI survey data.

In Ananthavaram, the most important sources of non-agricultural employment available to manual workers were building and road construction, work at the rice mill, headload work, and cattle-rearing. The three main types of non-agricultural employment were construction, technical services, and animal-rearing.

In Bukkacherla, the major non-agricultural occupations of workers were in road-building construction, headload work and transport-related activities. Since implementation of the MGNREGA had just begun in Anantapur district at the time of the PARI survey, data were not available to assess the impact of the scheme on the total number of days of employment.

In Kothapalle, in addition to construction, animal resources (buffalo, goat, and sheep) were an important source of non-agricultural activity.

Uttar Pradesh

In Harevli, agricultural wage-work was the main source of employment for both male and female workers. For a male worker, on average, 77 per cent of the year's wage-work was spent in agricultural tasks; the corresponding proportion for a female worker was 88 per cent.

In Mahatwar, of the 185 days of wage employment that a male worker received in a year, 175 days were spent in non-agricultural work. Female workers, on average, received only 38 days of employment in agricultural work and 28 days in non-agricultural work in the reference year (Table 9).

Days of Employment in Agricultural Activities

Sugarcane cultivation was the major source of employment for both male and female workers in Harevli. The proportion of gross cropped area under sugarcane cultivation was almost 55 per cent. The long crop cycle of sugarcane and the overlapping of planted and rattoon crops ensured that wage labour was generated throughout the

Table 9 *Average number of days of wage employment obtained by hired manual workers in agricultural and non-agricultural work, by sex, Uttar Pradesh villages, 2005–06* 8-hour days

	Harevli		Mahatwar	
	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work
Male workers	113	33	10	175
Female workers	95	13	38	28
All workers	106	24	22	114

Source: PARI survey data.

Table 10 *Distribution of number of days of non-agricultural employment, by type of activity, Uttar Pradesh villages, 2005–06* in per cent

Type of activity	Harevli	Mahatwar
Construction and related activity	41	17
Carpenters and blacksmiths	0	NA
Factory work	3	NA
Painting and related work	9	NA
Technicians (motor mechanics, welders, plumbers, etc.)	18	NA
Transport-related work	14	NA
Loading and unloading work	13	7
Bidi rolling, packing and related work	NA	2
Other work	2	74*
Total number of days of non-agricultural employment	100	100

Notes: NA: not applicable. *Mainly sinking borewell.
Source: PARI survey data.

year. The relatively low use of machinery in sugarcane cultivation was another factor explaining high labour absorption in sugarcane cultivation.

In Mahatwar, many workers had migrated to other States in search of employment. Since 2005–06 was a bad agricultural year, non-agricultural wage labour both within and outside the village was a major source of employment for male workers from hired manual worker households in this village. The task that employed the most male wage labour in the year was digging borewells. Women workers were confined to the agricultural sector and received, on average, a meagre 30 days of wage employment in the reference year. The drought-like situation in the kharif season and lack of irrigation in the rabi season were factors responsible for the low number of days of employment in agriculture (Tables 9 and 10).

Days of Employment in Non-agricultural Activities

Although opportunities for non-agricultural work were few in Harevli, some workers from hired manual worker households worked as construction labourers and at other non-agricultural tasks in neighbouring villages and towns. In addition, technical services and transport-related work were other sources of non-agricultural wage employment.

Maharashtra

Nimshirgaon, the irrigated, high-income, Marathwada village, was interesting for gender differentials in respect of agricultural and non-agricultural work. Non-agricultural employment was a very important component of the work year of male manual workers. The ratio of the number of days of agricultural work to the number

of days of non-agricultural work among male workers was 65:56. If we consider manual worker households in whose employment calendar non-agricultural work played a significant part, the ratio moves to 50:91, that is, decisively in favour of non-agricultural work. By contrast, no non-agricultural work at all was obtained by women workers in manual worker households.

In Warwat Khanderao, agriculture was the major source of employment, especially for female workers. For a male worker, on average, about one-third of the total number of days of employment in a year was spent at non-agricultural work. For a female worker, on average, of a total of 101 days of employment in a year, about 96 were spent at agricultural tasks.

Days of Employment in Agricultural Activities

Nimshirgaon is an agriculturally rich village, characterised by irrigated cultivation of high-value crops such as sugarcane, grape, and various vegetables. These crops accounted for 39 per cent of the gross cropped area and generated a large number of days of employment for male workers. For female workers, the cultivation of vegetables, sugarcane, and grape (in that order) – all of which used intensive methods of cultivation, required a large number of specialised workers, and involved very limited use of machinery – provided almost three-fourths the total number of days of agricultural employment that they received in a year.

In Warwat Khanderao, cotton was the most employment-generating crop, for male and female workers. Of the total number of days in a year spent at wage-paid agricultural work by a male worker, 75 per cent came from employment in cotton cultivation. The corresponding figure for a female worker was 78 per cent. In cotton

Table 11A *Average number of days of wage employment obtained by hired manual workers in agricultural and non-agricultural work, by sex, Nimshirgaon, 2006–07* 8-hour days

	Socio-economic class			
	Hired manual workers with significant non-agricultural work		Hired manual workers	
	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work
Male workers	50	91	65	56
Female workers*	89	0	120	0
All workers	65	57	82	39

Note: *Since only four women were employed at wage labour in non-agricultural work and three of them were employed on a monthly basis, they are not part of the analysis.
Source: PARI survey data.

Table 11B *Average number of days of wage employment obtained by hired manual workers in agricultural and non-agricultural work, by sex, Warwat Khanderao, 2006–07* 8-hour days

Sex	Socio-economic class					
	Hired manual workers with significant cultivation activity		Other hired manual workers		Hired manual workers	
	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work
Male workers	51	32	85	30	67	38
Female workers	89	4	101	5	96	5
All workers	69	19	94	16	82	20

Source: PARI survey data.

Table 12 *Number of wage workers working outside the village as a proportion of all workers doing non-agricultural work, by sex, Nimshirgaon, 2006–07* in per cent

	%
Male workers	89
Female workers	0
All workers	85

Source: PARI survey data.

Table 13A *Distribution of number of days of non-agricultural employment, by type of activity, Nimshirgaon, 2006–07* in per cent

Type of activity	%
Construction and related activity	43.8
Technicians (motor mechanics, welders, plumbers, etc.)	8.6
Transport-related work	36.2
Factory work	11.2
Domestic work	0.2
Total number of days of non-agricultural employment	100.0

Source: PARI survey data.

cultivation, the most labour-absorbent crop operations with respect to female labour were, of course, weeding and cotton-picking.

Days of Employment in Non-agricultural Activities

The main sources of non-agricultural wage employment in Nimshirgaon were located in nearby towns such as Ichalkaranji, Jaysingpur, Kolhapur, Shirol, and Sangli. Around 85 per cent of all non-agricultural workers were engaged in employment outside the village. The major sources of non-agricultural casual employment were construction and related activities (43.8 per cent of the total number of days of employment in casual work in the non-agricultural sector), and transport-related work (36.2 per cent of the total number of days of employment in casual work in the non-agricultural sector).

In Warwat Khanderao, the major non-agricultural occupations available to male workers from manual worker households were construction and related activities, followed by wage employment under government schemes. Transport-related activities accounted for the third-largest segment of the total number of days of employment in non-agricultural activities.

Non-agricultural wage-employment opportunities for women workers were very scarce. They received, on average, only four days of such employment under government schemes other than the rural employment guarantee scheme. No woman worker received work at any other non-agricultural activity.

Table 13B *Distribution of number of days of non-agricultural employment, by type of activity, Warwat Khanderao, 2006–07* in per cent

Type of activity	Socio-economic class	
	Hired manual workers with significant cultivation activity	Other hired manual workers
Wage employment under government schemes	16	34
Construction and related activity	74	34
Technicians (motor mechanics, welders, plumbers, etc.)	1	6
Transport-related work	7	15
Other work	2	11
Total number of days of non-agricultural employment	100	100

Note: Women from hired manual worker households did some wage work under government schemes (on average, four days of work), and they did not perform any other non-agricultural wage work.
Source: PARI survey data.

Rajasthan

In 25 F Gulabewala, non-agricultural work was scarce. It was scarce for men and women, but, as in most other villages, it was particularly scarce for women. The ratio between the number of days of agricultural and non-agricultural work in the annual work calendar of a male worker was 117:24. The corresponding figure for women worker was 51:16.

In Rewasi, the number of days of employment that a male worker received, on average, at agricultural tasks in the reference year was only 29. The corresponding figure for a female worker was 20 days. The main sources of non-agricultural wage

Table 14 *Average number of days of wage employment obtained by hired manual workers in agricultural and non-agricultural work, by sex, Rajasthan villages, 2006–07 and 2009–10* 8-hour days

	25 F Gulabewala		Rewasi		
	Agricultural work	Non-agricultural work	Agricultural work	Non-agricultural work	
				MGNREGA*	Others
Male workers	117	24	29	21	55
Female workers	51	16	20	52	1
All workers	79	19	26	32	37

Note: *These are the average number of days of work for male, female, and all workers, for which they received payment from the panchayat.
Source: PARI survey data.

Table 15A *Distribution of number of days of non-agricultural employment, by type of activity, 25 F Gulabewala, 2006–07* in per cent

Type of activity	%
Construction and related activity	21
Domestic work	48
Painting and related work	5
Transport-related work	6
Loading and unloading work	9
Work related to rearing animals	9
Other work	2
Total number of days of non-agricultural employment	100

Source: PARI survey data.

employment for male workers were construction and related activities, and work as motor mechanics.

Days of Employment in Agricultural Activities

In 25 F Gulabewala, cotton, rapeseed, and wheat predominated in gross cropped area. While employment was concentrated in these crops, widespread mechanisation of wheat cultivation restricted manual employment in specific operations.

In Rewasi, where the main crops were wheat, pearl millet, and rapeseed, poor irrigation and poor rainfall kept agricultural employment very low.

Days of Employment in Non-agricultural Activities

As discussed, there was very little employment available at non-agricultural tasks in 25 F Gulabewala. Table 15A shows that the sources of non-agricultural work in this village were primarily domestic work, and construction and related activity.

In Rewasi, the main source of non-agricultural employment was construction-related activity. In the PARI survey year of 2010, a year of kharif crop failure, transfer payments were made to manual workers under the Mahatma Gandhi National Rural Employment Guarantee Scheme. The panchayat paid 18 workers (11 males and 7 females) an average wage of Rs 100 per day. The hypothetical number of days of work (based on total wages received) ranged from five to 120, and amounted to 46 per cent of the total number of days of employment in non-agricultural tasks.

Underemployment and Poverty

The discussion so far indicates that, with a few exceptions, most manual workers in the nine study villages received less than five months of wage employment per

Table 15B *Distribution of number of days of non-agricultural employment, by type of activity, Rewasi, 2009–10* in per cent

Type of activity	%
Construction and related activity	37
Work under MGNREGA	46
Technicians (motor mechanics, welders, plumbers, etc.)	9
Transport-related work	3
Loading and unloading work	0.2
Petty shopkeeper's work	0.8
Other work	4
Total number of days of non-agricultural employment	100

Note: NA: not applicable.
Source: PARI survey data.

person per year. It also confirms that, with a few exceptions, the opportunities for skill-based rural non-agricultural wage employment were very few. The question raised in this section is whether the class of hired manual workers, which constitutes a very large segment of the rural population, is able to obtain a minimum income from wage work in agriculture and non-farm activity.

For purposes of simplicity, we have identified the minimum level of income in terms of India's official expenditure poverty line. This is not to say that we believe that the official poverty line is the best measure of poverty; indeed, in the extensive literature on the definition and measurement of poverty in India, almost all alternative poverty estimates computed by scholars show a much higher level of poverty than indicated by the official poverty line.[13] For example, in 2005, estimates of India's poverty rate ranged from 32 per cent (Planning Commission of India 2009) to 37 per cent (Report of the Expert Group to Review the Methodology for Estimation of Poverty 2009) to 77 per cent (NCEUS 2007). In this article, however, we use the official poverty line, low as it is, to show just how critical the problem of income poverty among manual workers in India's villages is.

For each manual worker household, we have computed earnings from wage labour on the basis of the actual number of days of employment obtained by working members of the household and the prevalent average wage rates. We have then compared this income to the State-level official expenditure poverty line. We have not deflated the poverty line for comparability across villages. The purpose of this exercise is to understand to what extent the wage earnings of a household dependent on manual employment as the primary source of its total income, in the survey year in a given village, correspond to the official poverty-line level of incomes in the State. It needs

[13] See Datt 1999; Datt, Kozel, and Ravallion 2003; Deaton 2005; Sen and Himanshu 2004; Sundaram and Tendulkar 2003a; GOI (2009); NCEUS 2007; Subramanian 2005; Patnaik 2004; and Sen 2001.

to be noted at the outset that our data are based on *incomes,* whereas the official poverty line is defined in terms of *expenditure.*

A Brief Note on Wages and the Poverty Line

To obtain the wage earnings of a hired manual worker household, we considered the average daily wages received from agricultural tasks. In Andhra Pradesh (surveyed in 2006), the average wage earnings per worker per day were Rs 67 in Ananthavaram, Rs 55 in Bukkacherla, and Rs 41 in Kothapalle. In Uttar Pradesh (surveyed in 2006), the average wage earnings per worker per day were Rs 41 in Harevli and Rs 40 in Mahatwar. In Maharashtra (surveyed in 2007), the average wage earnings per worker per day were Rs 68 in Nimshirgaon and Rs 47 in Warwat Khanderao. In Rajasthan, the average wage earnings per worker per day were Rs 47 in 25 F Gulabewala (surveyed in 2007) and Rs 171 in Rewasi (surveyed in 2010).

We take the official poverty line for Andhra Pradesh in 2005–06 to have been Rs 18,272 per household per annum (Datta, 2008). The corresponding figure for Uttar Pradesh in 2005–06 was Rs 23,987 (*ibid.*). In Maharashtra, the official poverty line (at the household level) in 2006–07 was Rs 21,735; and in Rajasthan, the official poverty lines were Rs 22,474 in 2006–07 and Rs 45,300 in 2010–11.

Additional Number of Days of Employment Required to Achieve Poverty-Line-Equivalent Income

Table 16 shows that the average number of days of employment obtained at the household level in the study villages was not sufficient for manual worker households to earn the official poverty-line level of income in all but one of the villages. This, of course, assumes that the households did not have any other source of income, a simplification made for the present exercise. Other than Nimshirgaon (Maharashtra), in all the other villages, individual workers from each manual worker household would have to work many more days in order to reach the poverty-line level of income. The additional number of days ranged from 78 days in Ananthavaram (Andhra Pradesh) to as many as 290 days in Mahatwar (Uttar Pradesh). The total number of days of employment that would provide a hired manual worker household with a minimum income, at the prevailing wage rates, was as high as 600 days in Mahatwar (where the average number of workers per household was 2.2) and 585 days in Harevli (where the average number of workers per household was 2.3). The total number of days of employment required to reach the poverty line was 265 in Rewasi (Rajasthan), followed by Ananthavaram, 273 days. Whether it is physically feasible for a worker to work at manual labour for as many as 300 days in a year is, of course, a separate question.

The evidence from these village-level data shows that the problem in rural India is of severe underemployment. Even if we assume that each household in all the

Table 16 *Additional number of days of employment per household required to attain the official poverty line, study villages, 2006–10*

Village	State	Survey year	Average number of days of employment obtained	Additional number of days of employment required to reach poverty line	Total number of days of employment required to reach poverty line
Ananthavaram	Andhra Pradesh	2006	195	78	273
Bukkacherla	Andhra Pradesh	2006	203	129	332
Kothapalle	Andhra Pradesh	2006	167	279	446
Harevli	Uttar Pradesh	2006	380	205	585
Mahatwar	Uttar Pradesh	2006	309	290	600
Nimshirgaon	Maharastra	2007	349	−29	320
Warwat Khanderao	Maharastra	2007	296	166	462
25 F Gulabewala	Rajasthan	2007	329	149	478
Rewasi	Rajasthan	2010	153	112	265

Source: PARI survey data.

study villages received 100 days of employment under the Mahatma Gandhi National Rural Employment Guarantee Act (which has not happened), aggregate wage employment would still be inadequate to ensure a minimum income (other than in Ananthavaram and Nimshirgaon).[14] As indicated in Table 16, hired manual worker households, which constitute the largest single class in many of the villages, can stay above the official poverty line only if they work additional days, ranging from 78 days in Ananthavaram to 290 days in Mahatwar. It should also be noted that the additional number of days of employment estimated on the basis of the official poverty line is likely to be an underestimation; with a more reasonable poverty line, the additional number of days of work required would be much higher.

Conclusions

There has been very little quantitative analysis of the extent of underemployment of rural workers in India, mainly on account of the lack of reliable large-scale data. However, an understanding of the problem of underemployment is a precondition to understanding the problem of livelihoods of rural workers. This article has tried to look at the severity of underemployment among rural workers, using data collected as part of the Project on Agrarian Relations conducted by the Foundation for Agrarian Studies. Data from nine villages in four States of India have been used in this article. Although the nine villages under study are situated in different agro-ecological regions of the country, and are characterised by diverse social and production conditions, some consistent patterns emerge with respect to the employment status of manual workers.

First, hired manual workers constituted the largest single socio-economic class in almost all the villages under study. Hired manual worker households accounted for 18 per cent of all households in Rewasi in Rajasthan, the lowest proportion among the study villages, and 56 per cent of all households in 25 F Gulabewala in the same State, the highest proportion among the study villages.

Secondly, in all the study villages, the number of Dalit manual worker households as a proportion of all manual worker households was higher than the share of Dalit households in the population. An extreme case was 25 F Gulabewala in Rajasthan, where Dalit households constituted 59 per cent of all households and 97 per cent of all hired manual worker households. In Ananthavaram in Andhra Pradesh, Adivasi households constituted only 6 per cent of all households but accounted for 19 per cent of hired manual worker households.

Thirdly, manual labour being an occupation of last resort, the class of manual workers was more caste-heterogeneous than other socio-economic classes. In all the study villages, Muslim, OBC, and Other Caste households also belonged to the class of

[14] The village surveys under PARI were done before nationwide implementation of the MGNREGA.

hired manual workers. The proportion of Other Caste households in the class of hired manual workers ranged between 2 and 26 per cent in the village populations that we considered. The participation of Muslim, OBC, and Other Caste households in wage labour reflects the fact that wide sections of the rural population are compelled to work as manual workers in order to earn a livelihood.

Fourthly, the results from the village surveys show widespread and severe underemployment among rural wage workers. A large proportion of the workers received employment for less than three months in an entire production year. Underemployment was even worse among female wage workers. The average number of days of employment obtained by female workers ranged between 60 and 120 days across all the study villages.

Fifthly, in all the villages, *rural* non-agricultural work lacked diversity. In the villages where there was some diversity in non-agricultural employment, and where non-agricultural work called for skilled work, the place of work was normally an urban area near the village.

Sixthly, opportunities for non-farm employment were very few for women, whose work calendars were generally restricted to (meagre) employment at agricultural tasks.

Lastly, the low number of days of employment, accompanied by very low wages in agricultural tasks, pushed the majority of hired manual worker households below even the official poverty line. Other than in Nimshirgaon (Maharashtra), hired manual worker households would require many more days of employment, at the prevailing agricultural wage rates, to reach poverty-line levels of income. When a household had no other source of income than manual wage work, its members – on average, two workers per household – would have had to work between 265 days in Rewasi (Rajasthan) and 600 days in Mahatwar (Uttar Pradesh), to ensure an income equivalent to the poverty line.

Given present policy, the generation of such a high number of days of employment does not appear feasible. Even if enough employment is created for a household to reach the official poverty line, the physical hazards associated with such a high number of days of manual drudgery would transgress all norms of decent work. The only short-term solution that seems feasible, therefore, is to increase the wage rates of rural workers, as the current level of wages can be rightly termed destitution wages. An analysis of the unit-level data of the 61st Round of the Employment and Unemployment Survey of the National Sample Survey Organisation (NSSO), 2004–05, shows clearly that in almost all States of India, the prevailing wage rates were lower than the official minimum wage rates (Dhar 2012a). Until such time as the issue of wage increase is addressed, the living conditions of manual worker households in rural India will continue to be abysmal.

New employment-generating policies are urgently needed to address the severity of underemployment among rural manual workers. Underemployment among the labouring poor of rural India results from two forces that operate against the creation of greater employment opportunities: first, from the development of agricultural production processes of a labour-displacing nature; and secondly, from cutbacks in rural development programmes. It is also evident that a state-sponsored scheme like the Mahatma Gandhi National Rural Employment Guarantee Act has failed to provide enough employment to offset the effects of this double-pronged attack on the labouring poor. A solution to the problem of underemployment of the reserve army of labour, through public investment in various development projects and schemes, is therefore crucial to improve the livelihood conditions of rural manual workers.

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Appendix Tables

Table A1 *Survey villages, by agro-ecological region*

Village	District	State	Regions
Ananthavaram	Guntur	Andhra Pradesh	East Coast Plains and Hills (South Coastal Andhra)
Bukkacherla	Anantpur	Andhra Pradesh	Southern Plateau (Rayalaseema)
Kothapalle	Karimnagar	Andhra Pradesh	Southern Plateau (North Telangana)
Harevli	Bijnor	Uttar Pradesh	Upper Gangetic Plains
Mahatwar	Ballia	Uttar Pradesh	Middle Gangetic Plains
Warwat Khanderao	Buldhana	Maharashtra	Western Plateau
Nimshirgaon	Kolhapur	Maharashtra	Western Hills
25 F Gulabewala	Sri Ganganagar	Rajasthan	Trans-Gangetic Plains (arid)
Rewasi	Sikar	Rajasthan	Central Plateau and Hills

Source: The agro-ecological regions are as per the classification by the Planning Commission.

Table A2 *Manual worker households as proportion of all households and all manual worker households, by caste, study villages* in per cent

Caste group	Ananthavaram	Bukkacherla	Kothapalle	Harevli	Mahatwar	Nimshirgaon	Warwat Khanderao	25 F Gulabewala	Rewasi
Dalit households	59 (43)	45 (19)	35 (33)	70 (37)	92 (60)	51 (33)	21 (10)	97 (59)	26 (10)
Adivasi households	19 (6)	NA	3 (1)	NA	NA	NA	NA	NA	8 (10)**
Nomadic tribe households	NA	NA	NA	NA	NA	2 (5)	22 (20)	NA	NA
Muslim households	12 (4)	0 (2)	0(1)	15 (12)	NA	15 (6)	24 (21)	NA	NA
All OBC households	7 (19)	25 (35)	54 (42)	15 (22)	8 (31)	6 (8)	33 (49)	2 (38)	23 (38)
Jat Sikh / Jat households*	NA	NA	NA	NA	NA	NA	NA	0 (33)	10 (30)
Other OBC households	NA	NA	NA	NA	NA	NA	NA	2 (5)	13 (8)
All other caste Hindu households	2 (28)	30 (44)	8 (23)	0 (29)	0 (8)	26 (48)	NA	1 (2)	43 (42)
Rajput households	NA	NA	NA	NA	NA	NA	NA	NA	40 (40)
Brahmin households	NA	NA	NA	NA	NA	NA	NA	NA	3 (2)

Notes: Numbers in parentheses represent number of households in each caste as proportion of all households.
NA: not applicable
*Jat Sikh households are only in 25 F Gulabewala and Jat households are in Rewasi.
** Meena households.
Source: PARI survey data.

Table A3 *Proportion of hired manual worker households, by caste group, study villages* in per cent

Caste group	Ananthavaram	Bukkacherla	Kothapalle	Harevli	Mahatwar	Nimshirgaon	Warwat Khanderao	25 F Gulabewala	Rewasi
Dalit households	34	48	46	45	35	62	64	91	48
Adivasi households	80	NA	99	NA	NA	NA	NA	NA	14**
Nomadic tribe households	NA	NA	NA	NA	NA	13	34	NA	NA
Muslim households	82	NA	NA	31	NA	94	34	NA	NA
OBC households	9	15	54	17	6	30	20		
Jat Sikh / Jat households*	NA	NA	NA	NA	NA	NA	NA	20	6
Other OBC households	NA	NA	NA	NA	NA	NA	NA	0	26
Other caste Hindu households	2	14	14	0	0	21	NA	25	
Rajput households	NA	NA	NA	NA	NA	NA	NA	NA	18
Brahmin households	NA	NA	NA	NA	NA	NA	NA	NA	20
All households	25	20	42	24	23	39	30	26	18

Notes: NA: not applicable.
*Jat Sikh households are only in 25 F Gulabewala and Jat households are in Rewasi.
**Meena households.
Source: PARI Survey data.

Table A4 *Proportion of hired manual workers employed in agricultural and non-agricultural wage work, by sex, Andhra Pradesh villages, 2005–06* in per cent

Village	Sex	Only agriculture	Only non-agriculture	Both
Ananthavaram	Male workers	68	14	18
	Female workers	100	0	0
	All workers	80	9	11
Bukkacherla	Male workers	56	6	39
	Female workers	90	0	10
	All workers	74	3	23
Kothapalle	Male workers	44	33	22
	Female workers	91	4	4
	All workers	74	15	11

Source: PARI survey data.

Table A5 *Proportion of hired manual workers employed in agricultural and non-agricultural wage work, by sex, Uttar Pradesh villages, 2005–06* in per cent

Village	Sex	Only agriculture	Only non-agriculture	Both
Harevli	Male workers	47	8	45
	Female workers	84	4	12
	All workers	62	7	31
Mahatwar	Male workers	7	72	21
	Female workers	90	7	3
	All workers	40	46	14

Source: PARI survey data.

Table A6.1 *Proportion of hired manual workers employed in agricultural and non-agricultural wage work, by sex, Nimshirgaon, 2006–07* in per cent

Socio-economic class	Sex	Only agriculture	Only non-agriculture	Both
Hired manual workers with significant non-agricultural work	Male workers	42	44	14
	Female workers	95	0	5
	All workers	63	26	11
Hired manual workers	Male workers	65	27	8
	Female workers	97	0	3
	All workers	79	15	6

Source: PARI survey data.

Table A6.2 *Proportion of hired manual workers employed in agricultural and non-agricultural wage work, by sex, Warwat Khanderao, 2006–07* in per cent

Socio-economic class	Sex	Only agriculture	Only non-agriculture	Both
Hired manual workers with significant cultivation activity	Male workers	45	14	41
	Female workers	78	0	22
	All workers	61	7	32
Other hired manual workers	Male workers	39	9	52
	Female workers	79	2	19
	All workers	61	5	34
Hired manual workers	Male workers	42	11	47
	Female workers	78	1	21
	All workers	61	6	33

Source: PARI survey data.

Table A7 *Proportion of hired manual workers employed in agricultural and non-agricultural wage work, by sex, Rajasthan villages, 2007 and 2010* in per cent

Village	Sex	Only agriculture	Only non-agriculture	Both	Only MGNREGA
25 F Gulabewala	Male workers	68	8	24	NA
	Female workers	92	3	5	NA
	All workers	82	6	13	NA
Rewasi	Male workers	24	18	30	28
	Female workers	60	0	5	35
	All workers	37	12	22	30

Note: NA: not applicable.
Source: PARI survey data.

Table A8 *Distribution of hired manual workers, by size-class of number of days of employment, Andhra Pradesh villages, 2005–06* in number and per cent

Size-class of number of days of employment	Ananthavaram		Bukkacherla		Kothapalle	
	No. of workers	As % of all workers	No. of workers	As % of all workers	No. of workers	As % of all workers
1 to 30 days	89	25	15	13	71	25
31 to 60 days	70	20	21	18	63	22
61 to 90 days	58	16	18	16	44	15
91 to 120 days	43	12	30	26	16	5
121 to 150 days	28	8	12	10	48	17
151 to 180 days	23	7	6	5	12	4
More than 180 days	43	12	15	12	36	12
All workers	354	100	116	100	290	100

Source: PARI survey data.

Table A9 *Distribution of hired manual workers, by size-class of number of days of employment, Uttar Pradesh villages, 2005–06* in number and per cent

Size-class of number of days of employment	Harevli		Mahatwar	
	No. of workers	As % of all workers	No. of workers	As % of all workers
1 to 30 days	13	22	17	23
31 to 60 days	8	14	7	9
61 to 90 days	1	2	6	8
91 to 120 days	2	3	12	16
121 to 150 days	13	22	6	8
151 to 180 days	5	9	4	5
More than 180 days	16	28	23	31
All workers	58	100	75	100

Source: PARI survey data.

Table A10.1 *Distribution of hired manual workers, by size-class of number of days of employment, Nimshirgaon, 2006–07* in number and per cent

Size-class of number of days of employment	Socio-economic class			
	Hired manual workers with significant non-agricultural work		Hired manual workers	
	No. of workers	As % of all workers	No. of workers	As % of all workers
1 to 30 days	41	16	63	14
31 to 60 days	40	15	61	14
61 to 90 days	29	11	44	10
91 to 120 days	36	14	85	19
121 to 150 days	37	14	57	13
151 to 180 days	16	6	55	12
More than 180 days	60	23	76	17
All workers	259	100	441	100

Source: PARI survey data.

Table A10.2 *Distribution of hired manual workers, by size-class of number of days of employment, Warwat Khanderao, 2006–07* in number and per cent

Size-class of number of days of employment	Socio-economic class					
	Hired manual workers with significant cultivation activity		Other hired manual workers		Hired manual workers	
	No. of workers	As % of all workers	No. of workers	As % of all workers	No. of workers	As % of all workers
1 to 30 days	7	8	7	7	14	8
31 to 60 days	17	20	18	18	35	19
61 to 90 days	25	30	16	16	41	22
91 to 120 days	15	18	23	23	38	21
121 to 150 days	12	14	15	15	27	15
151 to 180 days	5	6	6	6	11	6
More than 180 days	3	4	16	16	19	10
All workers	84	100	101	100	185	100

Source: PARI survey data.

Table A11 *Distribution of hired manual workers, by size-class of number of days of employment, Rajasthan villages, 2007 and 2010* in number and per cent

Size-class of number of days of employment	25 F Gulabewala		Rewasi	
	No. of workers	As % of all workers	No. of workers without MGNREGA	As % of all workers without MGNREGA
1 to 30 days	40	16	30	50
31 to 60 days	70	28	9	15
61 to 90 days	49	19	4	7
91 to 120 days	25	10	7	12
121 to 150 days	17	7	3	5
151 to 180 days	15	6	1	2
More than 180 days	38	15	6	10
All workers	254	100	60	100

Source: PARI survey data.