



Rural labour employment and livelihoods in tribal villages of eastern India

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Received: 08 August 2018 ; Accepted: 24 September 2018

ABSTRACT

This study examines the changing employment and livelihood patterns of rural labour households in tribal villages of eastern India. The study is based on the high frequency panel data collected under the ICAR-ICRISAT project on Village Dynamics Studies in eastern India from 2010 to 2014. The findings revealed that the work participation rate of landless labour households had a declining trend whereas that of land owning labour households had a mixed trend in tribal villages of Jharkhand. The employment in the farm sector declined for males but increased for women. Employment in non-farm sectors registered an increase in both the genders and the magnitude of the increase was higher in the non-farm sector as compared to the farm sector. Similar trend was observed for wage rate which showed faster growth in the non-farm wage compared to the farm wage. Both the sectors witnessed an increase in the labourer's wages during the past four years, however, the increase was much higher in the non-farm sector than the farm sector. The study also indicated that male labourers were employed at higher wages than their female counterparts in both sectors but the difference was narrowed down during last four years. A wage determinant analysis revealed that a healthy, educated, landowning adult male labour is likely to get higher wages than others. Non-farm wage employment is emerging as the most important source of income on labour households contributing 63 to 74% to their total income. The survey further revealed that income from farming constituted only 6 to 13% of the total income of labour households, but it showed increasing trend due to implementation of various mega agricultural development projects in the state.

Key words: Employment, Farm, Income, Labour, Poverty, Tribal villages

The issue of the functioning of rural labour markets has been at the centre of academic and political debate in India. The recent empirical evidences in the literature have attributed the prevalence of rural unemployment and underemployment to various factors, including the increasing population pressures, an ever-declining land-man ratio, small and fragmented land holdings, highly inequitable land distribution structures, and the lack of non-farm employment opportunities in rural areas (Chadha and Sahu 2002, Kumar *et al.* 2011, Kumar *et al.* 2015). The nexus of landlessness, increasing labour force and poverty has assumed even greater significance in the context of the need to improve the livelihoods of labour households in a poverty-stricken tribal state of eastern India. In one of the most backward states and labour-surplus economy of Jharkhand in eastern India, rural labourers can play a significant role in generating income

and sustaining millions of labour households in view of the growth potential of many tribal based non-farm activities in the state. This study focuses on wage employment as a key element for improving household well-being in rural Jharkhand. The agriculture has limited capacity to absorb the growing rural labour force, resulting in either migration to other cities or to seek wage employment in the rural non-farm labour market. There is evidence that the members of poor households have indeed been migrating to urban centres at a faster rate than that witnessed for the rest of the population, though the number of poor in rural areas still remains substantially higher than in urban areas (Ravallion *et al.* 2007). The importance of the non-agricultural sector has been growing in rural household income and employment, and is expected to grow further (Davis *et al.* 2010). However, the potential of rural non-farm wage activities in providing employment opportunities and thereby a clear pathway out of poverty to the surplus agricultural labour force has not yet been clearly established (World Bank 2008).

In Jharkhand, the livelihoods of the poor are largely dependent on agriculture and allied sectors. Labour in agriculture includes cultivators (particularly small and marginal farmers), landless labourers, livestock farmers and labours in allied sectors. Rural non-farm labour includes

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artisans such as potters, carpenters, blacksmiths, barbers and workers engaged in micro-enterprises like wood and metal workshops, brick kilns, construction work, cycle/motorcycle repair, spare parts, video rental, repair and servicing, tea stalls, hotels, cold drink shops, desi wine shop and grocers and general merchants. In this backdrop, this paper uses panel data to analyse the issues of employment generation, income, and the extent of indebtedness and earning levels of labourers in rural Jharkhand. To understand their livelihood patterns, an attempt has also been made to examine the role of non-farm labour participation in ensuring the well-being of the rural population.

MATERIALS AND METHODS

The presented study is based on high-frequency primary data collected from labour households by resident investigators over several years, under the ICAR-ICRISAT collaborative project entitled, Tracking Changes in Rural Poverty in the Household and Village Economies in South Asia. The five-step sampling procedure was followed for drawing a representative sample for the pursuit of a detailed investigation. All the 24 districts of Jharkhand were grouped into two categories based on certain development indicators, namely, agricultural development, socio-economic status and infrastructure parameters, that is, the more developed ones and the less developed ones. A sample of two districts, viz. Ranchi (more developed category) and Dumka (less developed category) was selected randomly. A sample of one block from each district and two tribal villages from each sample block were also randomly selected. Hesapiri and Dubaliya villages of Ranchi, and Durgapur and Dumariya villages of Dumka were selected for the study.

The panel linear regression model was used to find out the determinants of wage. The wage rate of individual labour was a dependent variable in the analysis, whereas age, gender, education level, body mass index (BMI), caste, size of land holding, and mode of wage payment, among other indicators, were considered as independent variables that are expected to exert an influence on the wages of rural labourers. Young educated healthy male labourers are expected to get higher wages. The indicators of age, education, economic strength and gender are self-explanatory. BMI is calculated on the basis of a person's weight and height. A person with an optimum BMI (18–25) is considered healthy and is expected to be more efficient at the workplace. The panel regression model adopted for analysis is as follows:

$$Y_{it} = \alpha + \beta_1 \text{Age} + \beta_2 \text{Age}^2 + \beta_3 \text{Gender} + \beta_4 \text{Education} + \beta_5 \text{caste} + \beta_6 \text{Land} + \beta_7 \text{BMI} + \beta_8 \text{Kind wage} + \varepsilon$$

where Y is the wage rate of individual labour (in ₹/day); Age is the age of labourers in years;

Gender is male (1), female (0); Education is the education of labourers in years;

BMI is the body mass index of labourers (number); Caste – Scheduled Tribe (1), otherwise (0); Land is the owning land (1), otherwise (0); Kind wage - if wages are

paid in kind (1), otherwise (0), BMI - when BMI is optimum (18–25) – (1), Otherwise – (0), ε is error term.

The census was conducted in each sample village and information pertaining to demographic characteristics, land, dwelling houses, the facilities available in each dwelling house, livestock, agricultural and domestic assets, and financial information were obtained from all the households in the identified villages. The households were further grouped into four categories. The first group comprised of households owning less than 0.20 ha of land. These households were termed as 'labour households'. In the second step, the remaining households were equally distributed among tertile groups, with the bottom, middle and top groups being referred to as the 'small', 'medium' and 'large' households, respectively. Thus, four groups were created in each village. From these groups 10 households were selected randomly making a total of 40 sample households per village and 160 households from all the four sample villages of Jharkhand. The present study was focused on wage-earning households only. Initially, the income of the household was worked out in terms of its earnings from the farm, farm labour, non-farm labour, salaried jobs, business, caste occupation, remittances, pension, subsidy and benefit from government programmes. Out of the 160 households surveyed, 108 households earned more than 50% of their income by working as labour in farm and non-farm activities in 2010. These households constituted the sample households for carrying out the detailed investigation. The household-level panel data for four years (2010–11, 2011–12, 2012–13 and 2013–14) were used for arriving at the relevant conclusions. Labour households were categorised into two groups, namely, landless labour households and land-owning households, in order to understand the role of a landbase in their employment and livelihood patterns.

RESULTS AND DISCUSSION

Extent of labour households

Rural labourers can be classified into two broad categories, viz. farm and non-farm. Farm labourers are those who are engaged in activities such as growing crops, livestock production, forestry, fishing and service activities related to these activities. The non-farm sector includes everything else that has not been considered in the aforementioned definition. Examining the changes in labour households and labour force in the villages under study it was observed that labour households constituted about 67.5% of the total number of households in 2010–11, which continuously declined to 51.3% in 2013–14. Landless labour households accounted for 86–92% of the total landless households, whereas the proportion of land-owning labour households to the total land-owning households varied from 48–65% in the villages under study. It has also shown a declining trend and less than 50% of land owning households belonged to labour households in 2013–14 (Table 1).

There was comparatively high proportion of labour households in the landless category. The proportion of

Table 1 The proportion and WPR of labour households in the tribal villages of Jharkhand (%)

Year	Proportion			WPR		
	Landless households	Land owning households	All households	Landless households	Land owning households	All households
2010-11	88.2	65.0	67.5	82.2	59.6	62.2
2011-12	86.7	64.1	66.6	85.0	67.1	69.1
2012-13	92.3	53.7	56.9	81.6	64.2	66.3
2013-14	85.7	47.9	51.3	81.6	55.5	58.6

landless labour households remained more than 85% whereas there was a decline in proportion of land owning labour households in Jharkhand during the said period. However, eighty percent landless households earned their livelihoods mainly by working as labourers. The decline in the proportion of labour households among the land owning labour households was mainly due to the result of an increase in the number of share croppers, petty business activities, and migration from the villages.

Work participation

The work participation rate (WPR) for the wage-earning households among the labour households was 62.2% in 2010–11, which declined to 58.6% in 2013–14. However, it was much higher in the landless labour households in the second year of investigation, although it marginally declined to 81.6% in 2013–14. More than fifty per cent of labourers from the land-owning households were also engaged in wage employment, and there was year-to-year variation but declined to 55.5% in 2010–14. More than 80% WPR among landless labours was mainly due to lack of employment opportunities other than wage employment in villages under study. Almost identical work participation among the landless households has been observed mainly due to their increasing rate of migration during this period. However, the work participation of the land-owning households was lower and declined to 55.5% in 2013–14.

The male WPR was more than two times of the female WPR during the period under study. The per capita land holding in Jharkhand has been declining rapidly and per capita net sown area is 0.05 ha, which is undulating and only about 12% has irrigation facility. The situation would be more alarming in the case of sub-marginal and marginal households. The land holdings of these categories of households are economically non-viable, and they have to depend on either wage earnings or migration. Hence, it may be conjectured that wages constitute the main source of livelihood for a majority of landless households, and

more than fifty per cent of the land-owning households also depend on wages in Jharkhand.

Employment patterns

In Jharkhand, rural labourers are generally employed either on a casual basis or as contractual workers, and they are free to seek employment anywhere. Presently, there is hardly any old system of attached farm labour in rural Jharkhand. An analysis of the employment pattern of rural labourers in the villages under study shows that among these rural labourers, on an average, an adult male earner was employed on wages for 177 days and a female labourer for 77 days in 2010–11 (Table 2). The incidence of male and female employment increased during period under study however female employment increased by 48% and male employment by only 14%. The non-farm sector provided more employment opportunities to male and female labourers during this period. There was an increase in employment for females in both the farm and non-farm sectors, whereas there was decline in employment for male in farm sector. Female labours recorded comparatively high increase in employment in farm and non-farm sectors than their male counterparts but the increase was higher in the non-farm sector.

The employment of male in the farm sector declined from 43 days in 2010–11 to 30 days in 2013–14, whereas there was an increase in their employment in the non-farm sector. The higher increase in female employment in Jharkhand was because of schedule tribe women who were shouldering greater responsibility to meet the daily needs for survival. In contrast to general trend of withdrawal of women from workforce due to increase in income level of household, there was increase in level of woman employment in Jharkhand when per capita income (at 2004–05 prices) increased by 6.9% against the corresponding increase of 2.84% at national level during last one decade (Govt. of Jharkhand, 2016). Per capita income of rural households also increased by about two fold during the period under study (from ₹ 721 in 2010–11 to ₹ 1430 in 2013–14). It has

Table 2 Employment pattern of male and female labour during the study period (man-days per year)

Year	Farm sector			Non - farm sector			All		
	Male	Female	All	Male	Female	All	Male	Female	All
2010-11	43	18	25	181	99	156	173	77	138
2011-12	38	35	36	192	104	162	162	74	125
2012-13	48	33	37	211	138	191	198	89	157
2013-14	30	34	35	203	144	188	198	114	172

also been observed that males tend to have lower WPRs in farm sector mainly due to the increase in the real wages. It has been observed that many of tribal males do not have urge for earning more for saving and accumulation of wealth (Ray and Chakraborty 2008). They are more interested in leisure whereas women community predominate in agrarian and other economic activities.

There has been a rapid transition of the labour force from the farm to non-farm sector during the past four years. Some of the self-employed households in the agricultural sector moved towards the labour force, leading to a rise in the number of small and marginal farmers working as labourers in the non-farm sector. The role played by the non-farm sector in providing rural employment has increased and it may be one of the potential pathways for generating employment opportunities and alleviating poverty (Kumar 2005, Kumar *et al.* 2011). Some of the labourers employed in the farm sector and the self-employed households in the agricultural sector moved towards the non-farm sector for employment. The trend in the real wage rate showed that the non-farm wage has grown faster than the farm wage. It has further been observed that wage employment, in general, is superior to self-employment, particularly in the case of small-sized farms in rural areas. It seems that agricultural growth may not be a means of increasing direct employment and that augmenting rural non-farm employment could be a significant part of the strategies of managing the vulnerabilities associated with rural labour livelihoods and of improving their socio-economic conditions. As development occurs, the expectation is that agricultural employment

would diminish, though agricultural growth is still likely to be a key driver of growth even in the non-agricultural economy through linkages.

Wages of rural labourers

It is important to understand the trends in rural wages, which constitute the major source of income for labour households and the main determinants of their livelihood security. Agricultural wage can serve as a proxy for assessing the status of poverty and livelihoods in rural areas (Deaton and Dreze 2002). An analysis of the employment trends in the villages under study points to the emergence of non-farm employment opportunities as the key for determining the livelihood status of rural households. The growth in the non-farm sector seems to be a catalyst for influencing the development of all the other sectors in rural Jharkhand. An attempt has been made here to examine the trend in the wages of the farm and non-farm sectors during the past four years. The average rural wage increased from ₹ 103 in 2010–11 to ₹ 182 in 2013–14 in these villages during the past four years (Table 3).

Female labourers remained, no doubt, low-wage earners compared to their male counterparts. But there was an increase of 91% in the wages of female labourers, which was much higher than the increase in the wages of male labourers (74%) during the past four years (Table 4). The increase in the wages of the female labour force was mainly due to their increasing participation in non-farm sector. Both farm and non-farm sectors witnessed an increase in the wages of labourers during the past four years

Table 3 Wage rate of male and women labour during 2010–14 (₹/day)

Year	Farm sector			Non - farm sector			All		
	Male	Female	All	Male	Female	All	Male	Female	All
2010-11	75	66	70	108	89	104	107	87	103
2011-12	100	86	92	133	105	127	132	101	124
2012-13	132	120	123	164	133	158	163	131	156
2013-14	98	93	94	186	173	184	186	166	182

Table 4 Determinants of rural wages in the selected tribal villages of Jharkhand

Dependent variable: log of wage rate (₹./days)				
Explanatory variable	Coefficient	Standard error	t-value	probability
Age	.01967	.00212	9.23	0.000
Age squared	-.00023	.00003	-7.67	0.000
Gender (male-1, otherwise-0)	.3872128	.0153247	25.27	0.000
Labour (non-farm-1, otherwise-0)	.1835412	.0250294	7.3	0.000
Education (years)	.0100167	.0015295	6.55	0.000
Caste (ST-1, otherwise-0)	.2170503	.0325764	6.66	0.000
Land size (acre)	.0025739	.0010957	2.35	0.073
Mode of wage (in kind-1, otherwise-0)	-.038484	.0259067	-1.49	0.137
BMI	.0363945	.0029008	12.55	0.000
Constant	3.12495	.0609399	51.28	0.000

No. of observations = 7627, R^2 (Within) = 0.281, R^2 (Between) = 0.622, R^2 (Overall) = 0.274, $F_{(2, 7605)} = 241.36$, Prob > F = 0.0000. Source: Authors' analysis Sources and level of income

but the increase was much higher in the non-farm sector (75%) than in the farm sector (34%). Male labourers were employed at higher wages than women labourers in both the farm and non-farm sectors. However, the comparatively high increase in wage was observed for female labours in both sectors. It clearly indicates that female labours started performing much better than male counterparts, not only in wage earning but in getting employment also. It warrants for assigning priority in training of skill development to rural women in Jharkhand.

Determinants of rural wages

An attempt has been made to find out the determinants of wage rate in the villages under study. The calculated coefficient of determination (R^2) indicates that the regression model used in the study has robust explanatory power and there is a fairly convincing relationship between the rural labour wage and the variables included in the analysis. It is evident from Table 4 that the coefficients of most of variables namely; age, gender, education, caste, and health status (BMI) emerged significant either at less than 1% probability. The results for all workers show that human capital coefficients, education and age (aproxy for experience) are significant determinants of rural wage. Both age and education have a positive influence on the wage, but age, after a level, stops fetching higher wages and the quadratic term of age is negative as expected. The rural wage depicts a positive relationship with the family size. A bigger household size indicates the higher availability of labour and thus higher bargaining power to extract wages in the rural labour market. Individuals from the scheduled tribe have been higher wages as compared to the Scheduled Castes (SCs) and Other Backward Castes (OBCs), indicating that there is discrimination based on caste in wage payment in Jharkhand, particularly in tribal dominated village. The satisfactory health condition (optimum BMI) has a positive and significant influence on the wage, indicating that a healthy workforce can get higher wages on the basis of efficiency and stamina. Male labourers earn higher wages than their female counterparts, which indicates the persistence of gender discrimination in the rural labour market in Jharkhand. The coefficient of land size is positive and significant at 10% of probability, indicating that land owning labours had more bargaining power for getting higher wage because they prefer to work as labour on higher wages, particularly in no-farm sector. Payments made in kind, though not common in wage employment (only 31%), turned out to be significant determinants of rural wages in Jharkhand. Labours getting wages in kind is likely to get lower wages than labours working in non-farm sector. In general, labours engaged in farm sector are paid in kind which is some time lower than non-farm sector where labour get payment in cash. However, wage payment in kind is less preferred by the labourers. The coefficient of kind wage is negative but not found significant at even 10% of probability. The local factors prevalent in the villages also influence the rural wage in Jharkhand. In summary, it may be said that a healthy,

educated, land-owning adult male labourer is likely to get a higher wage in the villages under study.

The income of labour households in the four villages under study in Jharkhand was also examined. There is a variation in income between the landless labour households and those with access to land for farming (Table 5). Per capita per month income of labour households is estimated to be ₹ 721 in 2010-11, but it was higher for the land-owning households (₹ 725) than the landless households (₹ 696). The incomes of both the types of labour households increased continuously during the past four years, but a higher increase in income was observed in the case of landless labour households (107%) than that of land-owning labour households (97%). It may be pointed out that per household monthly income turned to be higher on landless labour households than land owning labour households in 2013-14. This was mainly due to the higher proportion of labour in the former than in the latter households.

To examine the sources of income of labour households, sources were grouped into nine categories, namely, farm, farm labour, non-farm labour, salaried jobs, caste occupation and petty business, remittances, benefits from government development programmes including social security pensions, pension, and subsidy. The analysis of sources of income in Jharkhand reveals that non-farm wages constitute the most important source, accounting for 63 to 74% of the household income of the labour households during the past four years (Table 6). Income through farming constituted about 6 to 13% of the total income for labour households with year-to-year fluctuations, as farming is still dependent on the extent of rainfall. The income from farming was lower in 2010-11 due to deficient rainfall in the year. However, there was steady increase in proportion of farm income to total income during the period under study due to adoption of modern rice varieties in the state under different programmes of government for enhancing rice productivity in the state. Income from farm wages was much lower. The wages for farm work and opportunities for farm employment are influenced by the level of farm activities which has close association to extent of rainfall. However, availability of non-farm employment within and/or adjacent to villages is also a significant factor in fluctuation of farm employment.

Income from caste occupation and petty business was third important income of labour households in Jharkhand. It was mainly due to existence of traditional method of cultivation which requires services of blacksmith and carpenter and these services are generally provided by

Table 5 Per capita monthly income of labour households in Jharkhand (₹/month)

Year	Landless household	Land-owning household	All
2010-11	696	725	721
2011-12	1035	1017	1019
2012-13	1351	1408	1400
2013-14	1443	1427	1430

Table 6 Income from different sources for labour households in the villages under study (%)

Source of income	2010-11	2011-12	2012-13	2013-14
Farm	6.0	12.3	12.7	13.2
Farm labour	1.5	5.2	3.1	0.8
Non-farm worker	73.9	62.5	62.8	69.6
Salaried job	0.1	1.1	0.5	0.4
Caste occupation and petty business	9.0	11.6	11.0	12.1
Remittances	0.9	1.1	4.9	0.4
Pension	0.5	0.1	0.1	0.3
Benefit from govt. development programme*	1.4	2.2	2.2	0.1
Subsidy	6.7	4.0	2.7	3.1

*Including social security pensions

labour households. Potters are still visible in Jharkhand and generates significant income to potters households. Production and marketing of desi wine (*hadiya*) is very common in rural areas which contributes adequate income to some rural households in the state. Income through subsidy is the next important source of income on labour households which varied from 2.7 to 6.7% during period under study. The receipt of higher level of subsidy in 2010-11 was probably due to subsidy on higher quantity of food and other items under drought relief programme. Density of tractor was very low in villages under study but some of farmers have started tillage operations by tractors in the villages under study which might have adversely affected the farm wage employment.

About one-fifth of the adult male labourers have migrated from the villages, and consequently, remittances constitute the second most important source of income for labour households, accounting for about 10% of the total income of these households. The quantum of remittances showed an increasing trend due to the decline in opportunities for wage employment in the villages. In addition, business was not found to be an important source of income in rural Bihar. Its contribution to the total income varied from 0.4 to 2.1% for the labour households. The share of income from caste occupations hovered around 6 to 8% of the household income in these villages. However, potters, shoe makers and barbers are not getting adequate employment in rural areas due to the availability of alternative products and services in the nearby urban centres. The benefits accruing from government development programmes and subsidies contributed 2 to 3% of the total income of labour households because most of them did not have easy access to government programmes. The proportion of subsidy observed declining trend was result of increase in income in subsequent years. Proportion of income through salaried job and pension was low due to low level of government

employment in Jharkhand caused low level of education. Income through remittances was also low and fluctuated much during period under study because there was seasonal migration which varied from one year to another.

Poverty levels and extent of poverty

Jharkhand is the second poorest state after Chhattisgarh in India because of its high incidence of rural poverty. However, rural poverty has declined substantially during the last six years, viz. from 51.6% in 2004-05 to 40.8% in 2011-12. A comparative analysis of rural poverty among the farm and agricultural labour households revealed that during the past two decades, the incidence of poverty in the agricultural labour households has been much higher than that in the farming households. Incidence of poverty among labour households under study has been estimated by adjusting poverty line given by then Planning Commission, Government of India in 2011-12 through Rural Labour Price Index and it was found that the incidence of poverty declined among labour households under study from 55% in 2010-11 to 24.4% in 2013-14 (Table 7).

National Sample survey also found almost similar trend for agricultural labours during 2004-2009. It may be concluded that farm income, non-farm wages and remittances have played a primary role in increasing income and alleviating poverty among the labour households in Jharkhand. Male employment is declining in agriculture sector but women farm employment observed increasing trend. Hence, agriculture is still likely to be a key driver of growth even in the non-agricultural economy through linkages. Policies to extend systematic skill and training opportunities male and female workers would also help in augmenting opportunities of employment for migrants and non-farm workers, which would in turn, help in reducing poverty and improving the livelihoods of labour in rural Jharkhand.

Access to development programmes

More than 20 development and welfare programmes were implemented in the state for the benefit of the rural households and a majority of these programmes were targeted at the weaker sections, including labour households. An analysis of the data related to various development and welfare programmes revealed that the PDS was the most popular programme for labour households because almost all labour households had access to this programme. Under the PDS, food grains and kerosene oil were provided to

Table 7 Year wise labour price index and adjusted poverty line for rural Jharkhand

Year	Rural labour price index	Poverty line (₹/person/month)	Incidence of poverty (%)
2010-11	532	748	55.0
2011-12	535	760	38.2
2012-13	620	814	32.8
2013-14	654	984	24.4

Table 8 Proportion of labour households participated and average benefit accrued through different programmes

Development scheme	2010	2011	2012	2013
Public distribution System (% of hh)	78.7 (2952)	85.8 (3825)	86.8 (3746)	78.0 (3321)
Mid-day Meal	28.7 (523)	38.0 (466)	49.5 (1626)	42.7 (3071)
Social Security Schemes (Pension)*	16.6 (571)	11.3 (419)	11.0 (435)	9.7 (468)
Agril. Development Project	0.9 (4)	0.9 (13)	0.0 (0)	3.7 (12)
Anganwadi	28.7 (207)	18.9 (162)	24.2 (341)	35.4 (332)
Drought/Flood relief	15.7 (497)	18.9 (431)	0.0 (0)	0.0 (0)
MANREGAS	33.3 (587)	26.4 (724)	13.2 (1119)	28.0 (2922)
Indira Awas Yojna	0.0 (0)	0.0 (0)	2.2 (989)	7.3 (3293)
KCC and SHG	10.2 (896)	7.5 (311)	0.0 (0)	0.0 (0)
Other programmes**	1.8 (11)	2.8 (26)	6.6 (60)	3.7 (51)

* Old Age pension Scheme, Pension for physically handicapped and Widow Pension scheme; Includes family planning and Provision of construction materials for house. Figures in parentheses indicate benefits accrued through respective programme.

Below Poverty Line (BPL) families, while Above Poverty Line (APL) families were getting only kerosene oil under this scheme. The annual benefits per labour household accruing through the PDS were worked out to be ₹ 1442 in 2010–2011, which continuously increased and reached ₹ 1895 in 2013–2014. The second most popular government programme for labour households was social security schemes, which included Old Age Pension, Pension for the Physically Handicapped, and Widow Pension. About 17.5% of the labour households had access to these schemes in 2010–2011, which increased to 26.4% in 2013–2014. The per labour household quantum of benefit also increased from ₹ 397 to ₹ 706 during the period under study. Hence, it may be said that the coverage of social security schemes showed an increasing trend in Jharkhand during the past four years. Under the Mid-day Meal Scheme (MDMS), children were provided mid-day meals in the school, which not only helped in increasing enrolment and attendance in the school but also contributed towards improving the health of children by reducing malnutrition among them, particularly in the case of children from poor households. The coverage of MDMS was very low in 2010–2011 (3.2% of the labour households), but the figure went up significantly to about 58.5% of the labour households in 2013–2014. The per labour household benefit under the scheme was worked out to be ₹ 15 in 2010–2011, which increased to ₹ 678 in 2013–2014 (Table 8).

The study revealed that there has been a decline in

the proportion of labour households to the total number of rural households, particularly among landowning labour households but the transition of labour force from the farm to the non-farm sector is clearly evident. It has been observed that males were more interested in leisure whereas women community predominated in agrarian and other economic activities. Females have started playing a significant role in farming sector in tribal villages of eastern India. An enhancement in the role of the non-farm sector has been observed in providing rural employment. Hence, the strategy to increase non-farm employment could be seen as a potential pathway for alleviating poverty. There is need to revive these projects with greater focus on the weaker sections of society for the benefit of labour households. Social security schemes seem to have lost their steam and need attention for providing assistance to disadvantaged group of persons of labour households.

ACKNOWLEDGMENT

The authors are thankful to ICRISAT, Hyderabad for providing financial assistance to carry out the work of the project. Authors are also thankful to Director, ICAR RCER, Patna for providing necessary facilities and encouragement to carry out the project. All the field assistants who contributed in data collection and recording for the project is also dully acknowledged.

REFERENCES

- Chadha G K and Sahu P P. 2002. Post-reform setbacks in employment: Issues that need further scrutiny. *Economic and Political Weekly* 37(21): 1998–2026.
- Davis B, Winters P, Carletto G, Covarrubias K, Quinones E, Zezza A, Stamoulis K, Bonomi G and Di Giuseppe S. 2010. A cross country comparison of rural income generating activities. *World Development* 38(1): 48–63.
- Deaton A and Dreze J P. 2002. Poverty and inequality in India: A re-examination. *Economic and Political Weekly* 37(36): 3729–48.
- Government of Jharkhand. 2016. *Jharkhand Economic Survey 2015-16*, Planning Cum Finance Department, Finance Division, Government of Jharkhand, pp 1–359.
- Kumar A. 2005. Rural employment diversification in eastern India: Trends and determinants. Working Paper II, National Centre for Agricultural Economics and Policy Research, New Delhi.
- Kumar A, Kumar S, Singh D and Shivjee. 2011. Rural employment diversification in india: trends, determinants and implications on poverty. *Agricultural Economics Research Review* 24 (Conference Issue): 361–72.
- Kumar A, Singh R K P and Kumar Abhay. 2015. Rural labour employment and their livelihoods in Bihar: Micro-level evidences from selected villages. *The Indian Journal of Labour Economics* 58(4): 609–29.
- Ravallion M, Chen S and Sangraula P. 2007. New evidence on the urbanisation of global poverty. World Bank Policy Research Working Paper 4199, The World Bank, Washington DC
- Ray A K and Chakraborty S. 2008. *Society, Politics and Development in North-east India*. Concept Publication Company, New Delhi.
- World Bank. 2008. World Development Report 2008. Agriculture for Development, Washington DC.