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Recent Trends in Rural Employment and Wages in India: Has the expansion Benefitted the Agricultural Labours

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Abstract
This paper has examined three features of the agricultural economy within the context of transition of Indian economy: (a) shift in rural employment pattern, (b) trends in rural wages and agricultural growth, and (c) relationships between agricultural wages, productivity and rural non-farm employment (RNFE) in India. The changeover of farm employment to non-farm employment has been found higher for male than female workers and therefore the recent decade has witnessed a better rate of transition. The RNF sector provided employment to about 38 per cent of male and 21 per cent of female labour forces in 2009-10. It's observed that although the wages were lower for farm labours than non-farm labour, the expansion rate of agricultural wages has been above of non-farm wages. The wage determinant analysis has revealed that agricultural productivity and RNFE have a positive influence on agricultural wages, while labour availability (labourl and ratio) and high dependency on agriculture pull down the wage rates. The analysis has confirmed that the growths of agriculture and RNFE have trickled right down to the agricultural labour, indicating an inclusive growth. The study has concluded that policies directed towards improving agricultural productivity and promoting RNFE would offer better agricultural wage rates and assure rural livelihood security.
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Introduction
Rural employment and wages are the important factors which influence the livelihood status of rural households. It's widely witnessed that as economy grows, the labour force shifts from farm to non-farm sector and this migration is decided by the whole factor productivity of both the sectors. Similarly, experience within the developed countries has shown that in structural transformation, the contribution of agricultural sector to total GDP falls down, and therefore the secondary sector (industry sector) leads for a few period and at last the tertiary sector (service sector) constitutes the most important a part of GDP (Eswaran et al., 2009).

Employment pattern within the developing countries has revealed that development of other employment opportunities within the rural non-farm sector could be a necessity for productive farm employment of labour force under the ascension of population (Chaudhry and Chaudhry, 1992). The shortage of sufficient employment opportunities and stagnant wages may cause economywide problems like high incidence of poverty within the rural areas. An analogous process has been observed in China where growth of rural non-farm employment (RNFE) has revealed a big impact on poverty reduction (Janvry et al., 2005). The study on rural employment and wage trend is very important and useful in some ways. For instance, rural wages being the many source of rural income are the foremost determinant of livelihood security of rural households.

The agricultural wages have also been used as a proxy for studying poverty and areas (Deaton and Drèze, 2002; Lanjouw and Murgai, 2008). Under this scenario, identification of things which significantly influence the agricultural wages would help in formulating the appropriate strategies to sustain the expansion rate of wages. During this context, this study was distributed to explore the trends in rural employment and growth rates of rural wages. The study has also examined the impact of agricultural productivity growth, RNFE and availability of labour on rural agricultural wages.

Data
The study relies on various published and unpublished reports of the National Sample Survey Organisation (NSSO) and Labour Bureau, Government of India, New Delhi. The info on rural employment were taken from the reports of last five quinquennial surveys [43rd round (1987-88) to 66th round (2009- 10)] (http://mospi.nic.in). The information on wage rates for agricultural and non-agricultural labour within the rural areas were compiled from various problems with Wage Rate in Rural India (WRRI), published by Labour Bureau (http://labourbureau.nic.in). Within the present study, for a comparison of wage rates of farm and non-farm labours, the wage rate of a ploughman was considered for the farm sector and of a mason and / or carpenter for the non-farm sector. To compute real wages, the nominal wage rates of farm labour were deflated by consumer indicant for agricultural labour (CPIAL) which of non-farm labour by consumer indicant for rural labour (CPIRL) and 2011-12 was taken because the base year. The knowledge regarding state-wise GDP, gross cropped area, rural population and literacy rate were compiled from various Government published reports.

Methodology
Determinants of Agricultural Labour Wages
The determinants of agricultural labour wages were identified by using the cross-section and time-series data. The variables considered within the model were agriculture gross state domestic product (AgGSDP), share of AgGSDP in gross state domestic product (GSDP), literacy, labour availability and share of rural non-farm employment (RNFE). the info pertained to twenty states of India for 2 periods of your time. As data on a number of the chosen variables (rural population, literacy rate and employment) weren't available for a few years, the last two years of census reports were selected for constructing the panel data (2001-02 and 2011-12). A dummy variable was introduced within the model to estimate the time effect on value of the chosen variables. The functional sort of wage determination model will be written as follows: $Y = f(X1, X2, X3, X4, X5, D1)$ where, Y is that the agricultural labour wages (`/day); X1 is that the agriculture productivity (` crore /'000ha); X2 is that the share of agriculture gross state domestic product in gross state domestic product (%); X3 is that the rural literacy (%); X4 is that the rural labour supply (No. of labour per ` 000 ha); X5 is that the

share of rural non-farm employment (%) and D1 is that the time dummy (1, for 2011-12, and 0 for 2001-02). The state-wise annual average agricultural wages were used because the variable quantity.

The explanatory variables included within the model were as follows. It absolutely was expected that agricultural productivity could significantly raise the wage rate within the state. The share of Ag GSDP in total GSDP was taken because the major indicator of economic development of a state and it absolutely was assumed that the economically developed states would have higher wage levels, as compared to the economically-backward states. It had been also hypothesized that literacy level in an exceedingly state would positively influence the wage levels, while supply of rural labour (rural population by gross cropped area) would scale back wage rates. Finally, the states having higher RNFE share within the employment would have higher wage rate, as higher RNFE opportunities would accelerate migration of agriculture labour to the RNFE and successively, would create supply shortage of labour in agriculture and thereby leading to increase in wages. For this purpose, the share share of RNF employment was calculated from the NSSO reports for the chosen years.

Results and Discussion
Employment Pattern in Rural India
The agricultural employment was classified into two categories, viz. farm employment and non-farm employment. It's clearly visible from Table 1 that Indian rural population is primarily employed within the farm sector. In most of the developed countries, movement of labour force from farm to non-farm sector was witnessed because the economy of a rustic advanced with time. An identical structural transformation has been happening in India for the past three decades. However, the speed of transformation is slow. Although, the proportion share of farm sector employment has continuously declined since late -1980s, it still provided employment to about 60 per cent of male and about 80 percent of female workers.

The reduction in dependency on farm sector employment was higher for male workers (8 percentage point) than female workers (3 percentage point), indicating that female workers were more obsessed on agricultural sector than their male counterpart. Across the non-farm sector, manufacturing (with 7.7 percentage share) accounted for the very best share of male non-farm employment in 1987-88. However, its share slightly declined over time and it reached seven per cent in 2009-10. On the opposite hand, the feminine workers' dependence on manufacturing sector has been high and their share gradually increased from 7.5 per cent in 1987-88 to eight.7 per cent in 2004-05, but dropped to 7.6 per cent in 2009-10. Overall, not much change has been observed within the manufacturing sectors' share in rural non-farm employment over this era. In 2004-05, its share peaked for both male and feminine workers. Trade, hotel and restaurant sector occupied the second position in rural non-farm employment for male workers.

The proportion share of employment during this sector has marginally increased for male workers. On the opposite hand, it absolutely was not an attracting employment sector for female workers, who occupied only two to 3 per cent share throughout these periods. the development sector has grown amongst nonfarm employment during these periods for male workers. it absolutely was ranked third in 1987-88 and subsequently it occupied top position in 2009-10 with 11.4 per cent share in non-farm employment. It's evident from the info that this sector has absorbed most of the male labour force migrated from agriculture. Although a major increase engaged share was observed for the male workers, the dependency of female workers on this sector declined during the amount 1994 to 2005, but jumped in 2010. The share share

of transport, storage and communication services sector was doubled during the study period from two per cent to four per cent for male workers. Mining and quarrying sector provided employment to but one per cent of workers throughout this era. the advance in farm labour productivity thanks to technological developments and increased mechanization might be the key factors which forced the movement of labour from farm to non-farm sector. Further, enhanced capital investment, skill building and infrastructural development within the non-farm sector may need accelerated the transition of the economy.

Distribution of Rural Households by Nature of Employment

According to NSSO, a household type is classified based on the means of its livelihood on the basis of major source of its income during the reference period. Distribution of rural households based on the household type is shown in Table 2. A look at Table 2 reveals that the majority of households (about 50%) were under the self-employed category. The percentage share of households under self-employment in agriculture had marginally declined over the period and marginally increased under self-employed in non-agriculture. The percentage share of rural households self-employed in agriculture declined about three per cent points during the study period. Across labour households, the percentage share of households belonging to the agricultural labour category was highest for all the study years but it declined from 31 per cent in 1987- 88 to 25.6 per cent in 2009-10. The data also indicated that some of the self-employed households had moved to other labour category households, indicating casualization of employment in the rural areas

Trend in Agricultural Wages
The rural employment pattern shows that agriculture continues to be the key sector for determining the livelihood status of rural households in India. The agricultural growth decides the development of all other sectors. In this context, it was imperative to examine the trend in wages of the farm and non-farm sectors along with agricultural growth rates. The determinants of agricultural wages have also been discussed in details in this section. The real wage rates of three major occupations in the rural areas for the period 2002-03 to 2011-12 have been depicted. The wage rate was the highest for masons followed by 'carpenters' and 'agricultural labours'. The movements in the real wages for these Occupations were almost parallel over these years. The wage rates gradually increased for masons and agricultural labours and were almost constant for carpenters. On the average, a mason was paid ` 221 per day in 2003 and it increased to ` 250 per day in 2012. On the other hand, a carpenter's wages hovered around ` 200 per day during this period. The wages for an agricultural labour were though the lowest, recorded the highest wage increase of ` 41 per day from ` 137 in 2002-03 per day to ` 178 per day in 2011-12.

Regional Trends in Rural Wages
The state-wise wage rates for major occupations in rural areas are presented in Table 3. The states were categorzed into three groups based on agricultural wages of 2011-12, viz. (i) high wage rate states (>` 220/ day), (ii) medium wage rate states (` 150 - 220/day), and (iii) low wage rate states (< ` 150/day). The states were found to be almost equally distributed among these three categories. The agricultural wage rates were the highest in Kerala (` 483/day) and the lowest in Madhya Pradesh (` 108/day). The economically developed states (Kerala and Tamil Nadu), hilly states (Himachal Pradesh and Jammu & Kashmir) and agriculturally-progressive states (Punjab and Haryana) were under the high wage rate states category.

However, it was found that some of the productive states (Andhra Pradesh, Maharashtra and Karnataka) were under the medium and low wage rate categories. It was also

State-wise real wages for farm and non-farm labours in rural India

Observed that Gujarat, one of the high agricultural growth states in India, could find a place in low wage rate states category Shah (2011) has reported that migration of labours from the neighboring states like Rajasthan and Madhya Pradesh was the major factor which worked against the increase in wage rate in Gujarat. The variation in wages across the states was wide among high wage rate group than the other two groups of the states. The wage rate in Kerala was more than two-times of the other states within the group and it could be due to the shortage of labour for agricultural operations and cultivation of high-value crops. The wage rates were higher of non-farm occupations than of farm occupations. The inter-state variations across non-farm occupations were less in agricultural operations. The co-efficient of variation (CV) has clearly shown that although the differences in wagerates across the states was less for non-farm occupations, it showed the increasing trend during 2003-04 to 2011-12, it indicated the growing disparity in non-farm wagerates across the states. On the other hand, a decreasing trend was observed in differences for agricultural wages, implying that the disparity in wages for farm occupations has declined across states with time, may be due to the implementation of the schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme.

Rural Wages and AgGSDP

The state-wise growth rates for real wages and AgGSDP during the previous decade (2002-2012) and sub-period of XI Five-Year Plan (2007-12) were estimated and are presented in Table 4. At all-India level, the real wages during XI Plan grew faster than in the total period and it was true for both agricultural

Determinants of Agricultural Wages

The relationships among agricultural wages, productivity, and share of AgGSDP in GSDP, rural literacy, labour availability and share of RNFE in rural employment were empirically studied using the wage determinant model. The estimates of the model are given in Table 5. The linear regression model was chosen based on the overall significance of the model, which explained 56 per cent of the variations in the agricultural wages. All the variables included in the model were found significant, except rural literacy and had the expected signs.

The significant positive coefficient of agricultural productivity implies that improvement in agricultural productivity is associated with a considerable increase in the agricultural wagerates. On an average ` 10000/ ha increase in agriculture productivity, the wagerate would be increased by ` 12 per day. It indicates that agricultural productivity growth is inclusive. This conclusion is in line with the Sidhu (1988) who reported that agricultural productivity improved the wagerates in Punjab and Haryana. The significant negative coefficient of percentage share of AgGSDP indicates that with one per cent increase in share of AgGSDP, the agricultural wagerate would decline by one rupee per day. It suggests that as the state ceased to be an agrarian economy with contribution of AgGSDP coming down, the wages in the state are likely to increase. In other words, as the contribution of manufacturing and service sector to GSDP increases, it needs more labour and consequently, the agricultural wages increase. This fact is further strengthened by the positive relationship between agricultural wagerate and percentage share of non-AgGSDP. Thus, growth of non-farm sector has trickled down to rural labour also. The supply of rural labour also plays an important role in determining agricultural wages. As expected, the coefficient of labour supply was negative and

significant, and this means that the higher availability of labour per unit of land would significantly reduce the agricultural wages. It implies that the surplus labour should be diverted towards non-farm employment in order to assure better wages for agricultural labour and improve the rural livelihood conditions. The complementary role of RNFE in improving agricultural wages was better explained by its coefficient. The positive coefficient signified that a higher RNFE share would eventually increase the agricultural wages, by absorbing surplus labour from the agricultural sector. Similar results were reported by Kumar et al. (2011), indicating the role of RNFE in improving income and reducing of poverty in the rural areas.

Conclusions

The study has analyzed the changing employment pattern in the rural areas during the past two decades using NSSO survey data. Although a growth is seen in non-farm employment in rural India, it is rather weak in terms of its share in rural employment. The agricultural sector continues to be the largest employer of rural work force and it provided employment to about 60 per cent of the male workers and about 80 per cent of the female workers in 2018-19. The transition of labour force from farm to nonfarm sector has been fast in the recent period. Some of the self-employed households in the agricultural sector moved towards the labour force, indicating a rise in the number of small and marginal farmers working as labour. The trend in real wage rate has shown that agricultural wages have grown faster than the non-farm wages. The wage determinant analysis has indicated that agricultural productivity influences the agricultural wages, benefitting agricultural labours. The study has also shown that the states with higher share of non AgGDP in the total GDP pay higher wages, which implies that the growth of non-farm sector positively contributes to the agricultural wages. The share of RNFE is directly related with agricultural wages. It is likely that the growth in RNF sector and agricultural sector will continue which will further improve rural wages, which in turn, will have a strong impact on livelihood and economic security in India. Acknowledgment this paper is drawn from the research work undertaken for Institute project entitled "Rural nonfarm sector: Impact on income and employment generation". The author is highly thankful to Dr Suresh Pal, Head, Division of Agricultural Economics, IARI, New Delhi, for his guidance and encouragement during this study.

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