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and non-agricultural pursuits were also miserably under-employed. The sample household workers in both the communities were employed exclusively in agriculture and on an average, have hard work for 87 and 92 days per worker and those employed exclusively in non-agricultural activities worked only for 57 and 63 days respectively. The external sources of employment therefore accounted for the bulk of total man-days of employment among the migrant workers. This explains why there is a temptation for the workers of the tribal areas to migrate outside in search of better job opportunities.

The relationship between the employment and the various factors responsible for employment was studied using multiple regression analysis. The results of the regression analysis indicated that in the case of Juang households, farm size, family size and number of animals were found to be statistically significant, indicating thereby their relative contribution to employment. The value of regression coefficient representing non-farm employment was 0.0237 and 0.0475 in accessible and inaccessible areas respectively, indicating that non-farm employment generated through different development programmes provided additional employment. The same was also true in the case of Bhuinya households.

It is concluded that the impact of different development programmes undertaken by the Tribal Development Agency was quite distinct so far as employment generation was concerned. It may, however, be pointed out that extension of financial assistance to the households in the accessible villages would not increase the employment potential of all the tribal households. The employment potential would be higher if proper avenues are created to provide employment opportunities to the workforce of the households in inaccessible areas. There exists ample scope for increasing employment potential further for these two categories of tribal communities in both the locations.

Rural Non-Farm Employment in Tamil Nadu: Some Observations

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The paper analyses the level of rural non-farm employment (RNFE) at district levels in Tamil Nadu and at taluk levels in Tiruchirapalli district and identifies its determinants. The level of RNFE is not uniform in Tamil Nadu and in Tiruchirapalli district. Regional variations do exist. Districts and taluks with higher percentage of urban and literate population have got higher level of RNFE and vice versa; and such districts and taluks have also positively influenced their neighbouring districts and taluks respectively. The study considered four explanatory variables which could probably influence the level of RNFE in the state and in Tiruchirapalli district, namely, (i) percentage of area under commercial crops to total gross sown area, (ii) percentage of area under non-agricultural purposes to total geographical area, (iii) percentage of urban population to total population and (iv) percentage of rural male literates to total rural male population. To assess the direction of relationship between the explanatory variables, on the one hand, and the explained variable, namely, the level of

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RNFE, on the other hand, simple linear correlation coefficients were worked out. The results suggest that all the four variables have got positive influence on the level of RNFE. However, urbanisation and literacy have got statistically significant correlation coefficients. To assess the collective strength of influence of those variables on the level of RNFE, multiple linear regression was fitted to the state and district level data. The variables considered have explained about 20 per cent of the variation in the level of RNFE at the state level and 90 per cent of the same at district level. These facts indicate that the variables considered are more effectively influencing the level of RNFE at district level than at the state level. Again the regression coefficient of urbanisation alone is statistically significant.

Participation of Female Workers in Rural Non-Farm Employment - Trends, Constraints and Prospects

Sushila Srivastava, Brahm Prakash and S. Lal†

The paper examines the current status of women in non-farm rural employment and the trends, constraints and prospects of participation of workers, particularly females in rural non-farm employment. The study is based on secondary data collected from Census Reports, Reports of National Sample Survey and Planning Commission, Annual Reports of Labour Ministry and other published sources. The study revealed an increasing trend in the growth of total population but a decline in the sex ratio from 972 in 1901 to 927 in 1991. About three-fourths of the population of India lived in the villages during 1991. Among them, about 33 per cent of the population was below the poverty line. The occupational structure of the population revealed that all sectors registered almost stability. Only 22.73 per cent of the country's female population was economically active against 51.56 per cent of their male counterpart. Work participation rate of rural females was higher than that of urban females. Among the females, 44.23 per cent workers worked as agricultural labourers and 34.57 per cent as cultivators. The rest were employed in other employment including rural non-farm employment. Thus a low proportion of females were employed in rural non-farm activities. Low female literacy rate, marriage at an early age, social values which militated against women in a male dominated society, unfavourable attitudes of employers, lack of organisation, establishment of industries/factories in the urban areas, absence of legislation regarding job reservation for women in the government/semi-government/autonomous organisations and lack of incentives to rural women for self-employment were some of the major constraints responsible for their low participation in non-farm employment. However, the participation of rural women in gainful work can be increased considerably by educating them, imparting vocational training, forming co-operative societies, fuller utilisation of plant capacities in the public and private sector, generating additional employment for them by public investment in infrastructure and providing incentives for self-employment, changing the attitudes of male members of the family to share responsibility for house-keeping, strict implementation of 'equal pay for equal work', etc.

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Prospects of Income and Employment through Honey Bee-Keeping in Haryana

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An attempt has been made in the paper to study the impact of bee-keeping on income and employment in Yamunanagar district of Haryana. For this purpose, the primary data on cost and returns relating to bee-keepign were collected from 50 honey bee-keepers of Yamunanagar district. The cost and net returns from bee-keeping were worked out using tabular analysis. It was observed that the fixed costs accounted for about 87 per cent and variable costs for about 13 per cent of the total cost in bee-keeping. The returns from honey accounted for 85 per cent of the total returns from bee-keeping. The net return was maximum on the large category of farms, followed by on the small and medium categories of farms. It was observed that the cost of producing one kg honey was about Rs. 20, Rs. 19 and Rs. 18 on the small, medium and large categories of bee-keepers respectively. The bee-keeping enterprise provided an additional income of Rs. 6,003, Rs. 13,984 and Rs. 32,092 to the small, medium and large size-group farms respectively. Similarly, additional labour requirement also increased as the size of farms increased. The additional labour required for different sized farms was 65.22, 173.04 and 351.75 days on the small, medium and large size categories respectively. It shows that bee-keeping generates additional employment opportunities.

Employment Structure of Tribal Households in Teliamura Block of West Tripura District, Tripura

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An attempt has been made in this study to examine the existing structure of labour employment, the characteristics of available labour force and the factors affecting labour employment of the tribal households in Teliamura block of West Tripura district of Tripura. A stratified two-stage random sampling technique was adopted to select 69 sample respondents comprising 30 from Tripuri, 13 from Jamatia, 14 from Halam and 12 from Riang communities with probability proportion to their population. The results of the study indicate that the most dominant sources of employment as per the number of earners from the total working population was exclusively agriculture for the entire tribal community. But taking the number of man-days per worker into consideration agriculture does not provide enough employment opportunities for all the communities of the tribal households in the study area. The average employment per worker varied from 103.4 to 115.11 man-days only. The findings therefore clearly indicate the inadequacy of avenues of employment whether on the farm or in other allied activities in the region. This has caused frustration and indulgence in insurgency among a section of the tribal people. Therefore, human

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resource development and the strategy for manpower planning with adequate employment opportunities can be recommended as a suitable policy measure to solve the problem and reduce the tension in the study area.

Non-Farm Employment of Agricultural Labour Households in India: 1956-57 to 1987-88 - A Statewise Analysis

H.R. Sharma, Parkash Mehta and Ashok Kumar Sharma*

An attempt has been made in the paper to study the changes in the proportion of agricultural labour households and to examine the trends in employment and wages over a period of time among different states, using data from various rounds of National Sample Survey relating to the years 1956-57, 1964-65, 1974-75, 1977-78, 1983 and 1987-88. The results show that the proportion of agricultural labour households with land remained practically unchanged in a majority of the states. In Kerala, a sizeable increase in the proportion was observed whereas in Assam and Tamil Nadu a reverse trend was noticed. The households without land showed a mixed trend. Two states, Maharashtra and Punjab, recorded an increase in the incidence of landless agricultural labour households. The results further indicate that households with land increased significantly in all the states between 1983 and 1987-88 which may be attributed to growing sub-division of holdings, reverse tenancy, etc. The employment days available in non-agricultural occupations for adult male labour remained constant in Uttar Pradesh, Maharashtra, Karnataka, Kerala and Orissa whereas it declined in five other states. A similar trend was observed in the case of female and child labour. The study has shown that the daily money wage earnings of all the categories of agricultural labour households increased noticeably between 1956-57 and 1964-65 particularly in Assam, Punjab and Uttar Pradesh. The rising trend continued over the entire period of study.

Structure and Changes in Non-Farm Employment in District Etawah, Uttar Pradesh: A Case Study

G.N. Singh, R.K.S. Kushwaha, S.D.S. Sengar and V. Prasad†

The paper attempts to examine the level of employment in farm and non-farm works during pre- and post-machinery use and the extent of non-farm employment generated through public and private expenditure in Etawah district of Uttar Pradesh. The study is based on a sample of 100 target group of farmers selected purposively from Jaswant Nagar block of the district at two points of time, i.e., 1980-81 and 1993-94. The study showed that non-farm employment through public and private works in the post-machinery use

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period (1993-94) increased by 131.7 per cent, 110.3 per cent and 415.4 per cent for subsidised, non-subsidised and private works respectively over pre-machinery use period (1980-81). It was the highest for private works. As regards public works, non-farm employment was higher for subsidised works. Out of the total available family labour days of 900 and 945 per household, only 58.26 per cent and 67.87 per cent were utilised as farm and non-farm employment for pre- and post-machinery use periods respectively. The farm employment was higher in pre-machinery use period while non-farm employment was higher during post-machinery use period for the target group because of more public and private expenditure which generated non-farm works to a larger extent in the rural areas for the last 20 years. It may thus be concluded that several poverty alleviation programmes initiated by the Government and private expenditure in agro-industries and other works in the rural area have generated non-farm employment to absorb the surplus labour of the target group consisting of the rural poor during the post-machinery use period.

Irrigation Expansion and Growth of Non-Farm Activities in Matar Taluka Region, Gujarat

B.L. Kumar*

Irrigation transforms agriculture. As a catalytic agent, it has a pervasive effect on agricultural production, agro-processing, trade and transport activities. The paper explores the linkages between the growth of irrigation and changes in non-agricultural activities, especially agro-processing and trading in Matar taluka of Gujarat. The data for the study have been collected from both primary and secondary sources. To study the dynamics of rural growth, surveys were conducted in 1965-66 and again in 1974-75 in 28 sample villages.

The study shows that the extent of irrigation in Matar taluka increased from about 26 per cent in 1965-66 to 45 per cent in 1974-75 and further to 66 per cent by 1982-83. Agriculture of the taluka has been transformed substantially due to the increase in irrigation. The area and production of paddy and wheat increased manifold in the taluka. This increased production of paddy led to an increase in the market sales of paddy for processing.

The available secondary data show that the number of rice mills in the taluka increased from 12 in 1965 to 28 in 1975 and further to 58 by 1982. During the same period, the average installed capacity of rice mills also increased from about 6 tons an hour in 1965 to 37.5 tons by 1982. It was observed that the growth of integrated and large-sized rice mills has been particularly pronounced in the post-1975 period.

The survey data also suggest an appreciable growth in the number of retail trade outlets in the sample villages during 1965-82. A cross-sectional analysis of data from 28 sample villages suggests a significant and positive relationship between the extent of irrigation and the number of retail trade outlets as also their sales. Overall, the survey data suggest that villages with a relatively high level of irrigation also have a high density of processing units

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and sales outlets. The rise in local processing and consumption demand seems to have been absorbed by increasing and better utilisation of the existing milling capacities and by the expansion in the quantum of trade undertaken by the existing trade outlets.

Growth of Non-Farm Employment in Rural Areas of District Amritsar (A Case Study)

J.S. Chawla†

The paper examines the participation of rural workers in non-farm employment activities and their economic characteristics so as to derive suitable policy implications. In order to meet the various objectives of the study, the required information was collected through a structured schedule from 400 randomly selected households spread over six randomly selected villages (two villages from each zone) from three zones of district Amritsar (the zones were delineated on the basis of distance from the headquarters). The data pertained to the year 1992-93. Averages and percentages along with tabular method were used for derivation of inferences.

Activitywise break-up of the workers revealed that 41.30 per cent of the workers were engaged in the secondary sector and 58.70 per cent in the tertiary sector. For the zones these figures varied between 39.61 and 44.80 and between 55.80 and 61.39 per cent respectively. Among the secondary activities, the manufacturing sector provided the maximum employment and electricity and gas the minimum. This was also true for the zones. In the case of tertiary sector (service activities) maximum employment was provided by wholesale and retail trade and minimum employment by storage and warehousing. Similar trends were observed in respect of zones. However, zones closer to the district headquarters showed greater tendency towards employment in these activities vis-a-vis zones situated at distant places. The average size of the family worked out to 6.03 members and it ranged from 5.5 to 6.80 members across the zones. The average number of workers per family was 3.04 and it ranged from 2.80 to 3.40 workers across the zones. Zone I being closer to the district headquarters showed less dependency load as against zones II and III. The ratio of non-agricultural workers to total workers was 39.23 per cent. It was maximum for zone I and minimum for zone III, showing thereby that workers near the urban centre were absorbed in non-agricultural employments/activities.

The share of workers to non-agricultural workers working in own account enterprises and other establishments ranged between 55.30 and 60.20 and between 39.80 and 44.70 per cent respectively across the zones. Workers close to the city found jobs to a larger extent in own account and other establishment enterprises. There was greater concentration of enterprises in the rural areas as compared to the urban areas. It was also true for the zones. A similar trend was observed with respect to concentration of workers which was more in the rural areas and less in the urban areas. The female participation in work was 25.37 per cent of the total non-agricultural workers. It was more in zone I than in zones II and III. The

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study suggests that the growth of non-farm activities in the rural areas is symbolic of economic development and adequate investment is needed in these activities to generate employment potential and income.

An Economic Analysis of Non-Farm Employment and Wage Pattern in Rural Punjab: A Case Study

S.S. Chahal, K.C. Dhawan and Raj Kumar*

An attempt has been made in this paper to examine the structure of non-farm employment and wages at the micro level in rural Punjab. To achieve the objectives of the present study, Bilaspur village in Ludhiana district was purposively selected. The survey method was used to collect data regarding education, wage, income in different occupations, duration and nature of employment on specially designed schedules for the year 1994-95. Simple statistical tools, such as average and percentages were used to analyse the data. The tabular analysis was employed to interpret the results.

The study revealed that the proportion of employment in the farm sector to non-farm sector was 0.62:0.38. The pattern of employment in the farm sector indicated that agriculture accounted for only 18.72 per cent of the total employment in the selected village, followed by allied agriculture and agricultural labour. The relationship between literacy and employment showed that as the level of literacy increased, the number of persons employed in agriculture decreased. The pattern of employment in the non-farm sector reveals that 33.77 per cent of the persons were employed in the public sector, followed by the self-employed, wage earners and private sector jobs. It was found that a vast majority of the job seekers were permanently employed. The wage earners, on an average, got employment for 316 days in a year. The structure of self-employment indicated that 21 per cent of the total self-employed were transporters, followed by fruits and vegetable sellers, masons and carpenters and shopkeepers. The tailors, cobblers, milk vendors, custom-hiring services and cycle mechanics accounted for nearly 2.63 per cent each of the total self-employed. The rest of the self-employed persons such as Halwai, handpump boring, motor mechanics, cart owners, etc., accounted for 2.63 to 5.26 of the total.

Apparently, the wage pattern of self-employed revealed that the traders got higher income than the service class. The level of literacy has logically shown a highly positive relation with earnings of all the categories of employment in the non-farm sector. Further, the self-employed earned the highest income, followed by those employed in private jobs, government jobs and wage earners. A comparison of earnings in the farm and non-farm sector revealed that the allied agriculture led in respect of earnings in the farm sector and self-employment in the non-farm sector. On the whole, the share of the two sectors in total income of the selected village was almost equal. The share of non-farm earnings is gradually on the increase in the rural area though the rural area seems to be dominated by agricultural sector. This became possible with the launching of various employment schemes, especially

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self-employment schemes in the rural areas. Besides, the increasing level of literacy is one of the most important parameters instrumental for these changes. However, there is need to further strengthen the infrastructure in the rural areas so as to augment non-farm sector employment which will go a long way to reduce unemployment and disguised employment in the rural areas. To sum up, the people of the selected village have taken up diverse non-farm occupations which have lessened their dependence on agriculture and consequently increasing their income. The sound infrastructure in the rural area probably has checked the flow of rural masses to the towns to a great extent.

Impact of Non-Farm Employment on Income Generation in Smaller Farms: A Case Study in Two Districts of Madhya Pradesh

Ashutosh Shrivastava,† M.C. Athavale* and S.K. Gupta†

An attempt has been made in the paper to study the pattern of rural non-farm employment and its impact on income generation and to find out any discrimination between sexes in non-farm employment and wages in the state of Madhya Pradesh. The study is based on data collected from a sample of 100 farmers belonging to the marginal, small and medium size-groups selected randomly from ten villages, five each from Balaghat district of the Chhatisgarh plains region and Jabalpur district of Kymore plateau and Satpura hills region. Out of the selected farms, the marginal, small and medium farms were 36, 42 and 22 per cent respectively. The average size of farm was 0.60, 1.63 and 3.18 hectares for the marginal, small and medium size-groups respectively, clearly indicating the poor economic base of the selected farm families. Of the total active workers in Jabalpur district, 51 per cent were males and 49 per cent were females; the corresponding figures in Balaghat were 48 and 52 per cent. The study revealed that the labour units per hectare decreased with the increase in the size of farms which indirectly pointed out to the surplus labour available on much smaller farms, i.e., marginal and small farms. The average per family farm employment available in Jabalpur district was 287 days as against 367 days in Balaghat.

The contribution of non-farm employment was significant in Jabalpur district which accounted for 40 per cent of the total employment available to a farm family as against 24 per cent in Balaghat district. It indicates low level of development of agriculture in Jabalpur district, which ultimately forced the small farmers of the district to take up non-farm employment in order to generate more income. The contribution of non-farm employment to income generation was also very significant, accounting for 34 per cent of the total income in Jabalpur district and 26 per cent in Balaghat district.

It was also observed that there was a clear-cut discrimination between sexes and employment in both the districts. The male workers had cornered a lion's share (more than 70 per cent) in non-farm employment mainly because (i) some skills needed male labourers

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only and (ii) non-farm employment was available at a distance far away from the native village which only male labourers could afford to do. The average wages in both the sectors also revealed that the male workers earned higher wages than the female workers.

Changing Structure of Rural Non-Farm Employment in Hilly Economy

M.S. Jairath and B.K. Gupta*

The paper attempts to study the changes in the level and structure of rural non-farm employment in North-Western Hill Region of India during the period 1980-90. The region comprises the hills of Jammu and Kashmir, Uttar Pradesh hills and Himachal Pradesh. Himachal Pradesh forms an important segment of the hill region. During last few decades the state has made appreciable progress in the development of agriculture, horticulture, livestock, industry, infrastructure and tourism. Total employment in Himachal Pradesh grew at the rate of about 3.65 per cent annually. The state recorded a negative growth in farm employment whereas the growth was positive in the case of non-farm sector. The urban areas recorded higher growth compared to the rural areas. Total employment in the rural areas increased at a rate of 2.85 and 3.52 per cent per annum for persons usually working and hired workers respectively. It is interesting to note that the rate of growth in rural non-farm employment was much higher than that of total rural employment in the state.

The rural inter-sectoral ratio between farm and non-farm employment revealed that the number of persons usually working in non-farm to farm improved substantially and reached a level of 26.17. Similarly, the number of hired workers in the non-farm sector to farm sector increased to about 78 in 1990 from a mere 28 in 1980. This indicates that rural non-farm employment is expanding.

The number of persons usually working per thousand population also showed an increase. The trend was similar for hired workers. The density of workers per hundred sq. km. of area recorded a jump of 36 and 45 per cent for persons usually working and for hired workers respectively.

The relative shares of farm and non-farm employment in total rural employment between 1980 and 1990 showed the dominance of the non-farm sector in the total rural employment as it contributed about 94 per cent in 1980. However, a slight rise in the share of total workforce employed in non-farm activities was evident in 1990. The increase in the share of rural non-farm employment could be ascribed to the impact of farm, horticulture, industrial, infrastructural, tourism and rural development. These sectors helped the state to open up the gates for agro-based, horticultural-based and demand-based establishments.

The increase in rural non-farm employment is significant and its spread across a variety of activities brought several other favourable changes. Much of the employment was in activities such as community, social and personal services, wholesale and retail trade and financial and insurance services. The introduction of roadside restaurants boosted the

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expansion of restaurants and hotels and thus expanded rural non-farm employment. The trend was similar in the case of mining and quarrying and community, social and personal services. Wage employment in the non-farm sector rose by nearly 45 per cent (from 1.18 to 1.71 lakhs) during the period of the study. The sectors like community, social and personnel services, financial and insurance, wholesale and retail trade, and restaurants and hotels emerged as fast growing activities in the state.

The study highlights that though the growth of non-farm employment as a whole as well as in a majority of activities in particular is on the rise, it is still much below the levels prevailing in other hilly areas of the country. The study suggests that to accelerate the growth of non-farm employment in the hilly, backward and tribal areas, it is essential to identify the potential activities. It is high time to draw an activity-based action plan and implement the same in such a way that it emerges as the predominant and fast expanding export sector. This will further give impetus to non-farm employment in the hilly state. It is also suggested that while identifying these potential activities every effort should be made to launch a 'resource caring and environmental friendly study'. While implementing these plans, steps need to be initiated for 'worker caring and worker tracking' in such a way that the productivity of workers improve substantially and the country does not suffer further on account of inflation in the years to come.

Pattern of Non-Farm Employment of Marginal Farmers in Raipur District of Madhya Pradesh

A.K. Gauraha[†]

The study has been designed with a view to considering the effect of urbanisation on employment, income and expenditure of the marginal farmers having a holding size of less than one hectare in Madhya Pradesh. It is based on a sample of 80 marginal farmer households, selected from four villages of Raipur tehsil of Raipur district. The region under study is divided into two zones, i.e., urban and rural villages. The villages within a radius of ten kilometres from Raipur town are classified as urban villages while the villages located beyond ten kilometres but within 20 kilometres from the town are classified as rural villages. The data were collected through personal interviews with the help of schedules for the year 1993-94.

It was observed that the average size of holding was 0.7 hectare and the average family size was about 6. The total labour force and participation ratio was 91.85 per cent and 76.07 per cent respectively. Only 62.88 per cent of the total man-days available were employed in the total economic activities. For a majority of the households employment was generated through agricultural work (60.54 per cent), private works (20.32 per cent) and construction work (20.22 per cent). An equal proportion (50 per cent) of employment was generated from agricultural and non-agricultural areas in urban villages, while more than 70 per cent of employment was generated from agricultural works in rural villages. Higher wages, less

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physical exertion, short distance of town and more employment duration were the major reasons for the higher non-agricultural employment of the marginal farmers in the urban villages. There has been a mixed effect of urbanisation. Long distance, lack of transportation, less opportunities of non-farm employment, etc., were the major reasons for the lower percentage of non-agricultural employment in the rural villages, especially for the female labour. On an average, the agricultural sector provided employment (per person) for 99 days to marginal farmers and the non-agricultural sector for about 65 days in a year. Of the total available female labour days, only 49.92 per cent was utilised; this figure was more than 70 per cent in the case of male members in both the situations. The percentage of surplus labour days was higher in the case of female labour (50.08 per cent) as compared to male labour (23.50 per cent). In rural villages the surplus of male and female labour days was higher than in urban villages. It is also observed that the prevailing wage rates are very low as compared to the wage rates announced by the government. The total income from all the sources was considerably higher in the urban villages (Rs. 1,988 per person) than in the rural villages (Rs. 1,763 per person). About 82.63 per cent of the total income was derived from agriculture (62.53 per cent), private works (13.35 per cent) and construction work (6.75 per cent). The sample households also supplemented their income through government works, white washing/painting, etc. About 76.30 per cent of the total income was invested on food items and 20.50 per cent on non-food items.

It is suggested that there is need to intensify agriculture in its wider connotation which includes animal husbandry, pisciculture, sericulture, horticulture, agro-processing, agro-based by-product oriented cottage industries to generate more employment for the rural masses especially for female labour. In respect of infrastructure provision, one of the most efficacious instruments for generating overall non-farm employment growth appears to be capital expenditure on minor irrigation projects, roads and development of markets, etc. Formation of agricultural labour organisation and effective implementation of minimum wages act may go a long way in enhancing the well-being of the marginal farmers/agricultural labourers.

Employment Generation in a Rural System Perspective

S. Senthilnathan and C. Sekar*

Serious efforts taken by the Government from the Third Five Year Plan onwards to eradicate unemployment problem in the country have not shown any fruitful results in terms of improving the living standards of the rural poor. This is evidenced by the fact that all the Five Year Plans including the proposed Ninth Plan has eradication of unemployment as their main objective. A brief review of literature and analysis of data in National Sample Survey reports clearly indicate a trend towards increasing rural non-farm employment. This was the case noticed in Kerala and Andhra Pradesh. But Rajasthan and Karnataka experiences are in favour of the agricultural sector. All over the country the percentage of people depending on agriculture for their livelihood has not shown a significant decline. Hence, it

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is imperative that the system of rural employment generation should have agriculture as the base and the scope for extending and expanding employment should lie in the non-farm sector. The recent policy of the government is to support the agricultural sector through diversification and value addition in the form of agro-processing. A rural employment generation system is suggested which should consider stagewise and stepwise flow of labour from one sub-system like crop production, livestock, forestry, non-farm, industry and services and ensure three types of linkages, viz., backward, forward and lateral to generate employment both in the farm and non-farm sector.

Impact of Operation Flood on Income and Employment Level of Rural Women - A Study in Madurai District

M. Thilagavathi and S.R. Subramanian†

The study attempts to analyse the impact of Operation Flood on income and employment generation to rural women in Madurai district of Tamil Nadu. It is based on primary data collected from 120 households selected from five milk producers co-oprative societies in the district. Of the selected sample households, 80 were members of milk co-operatives and 40 were non-members. The results of the study indicate that in areas where the Operation Flood programme has operated, the employment created for the women folk in the rural areas was nearly double. Nearly 81 per cent of women earners of the beneficiary households were involved in livestock activities as compared to only 49 per cent in non-beneficiary households. Livestock enterprise created nearly 286 days of employment for rural women in the beneficiary households as compared to 142 days only in non-beneficiary households. Also dairying provided additional and regular flow of income to the rural households. The income from livestock per family was Rs. 18,792 and 17,183 respectively for the beneficiaries and non-beneficiaries. This implies that livestock is one of the major components of the income generating source for the rural families. Hence, the Operation Flood programme has positive signs to bring more people under this scheme to uplift the rural poor from poverty by providing employment to the women folk in the rural areas, particularly in livestock activity where their involvement is high. Also, this programme needs to focus on streamlining the provision of inputs at subsidised rate and procurement of milk at a favourable price.

Off-Farm Employment and Wages in Haryana

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An attempt has been made in the paper to examine the trends in farm and boff-farm employment and the relationship between wages and productivity in the agricultural sector.

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The study is based on secondary data collected from *Statistical Abstracts of Haryana* for the period 1966-67 to 1991-92. The compound growth rates were worked out to examine the trends in wages, prices and productivity. The study reveals that despite a decline in the share of the agricultural sector in the employment of the total workforce, a majority of the population is still supported by this sector. The average wages paid to agricultural and non-agricultural workers in the state have increased manifold between 1971-72 and 1991-92, the increase varied from 522 per cent for non-agricultural labourers in factory employment to 697 per cent for agricultural labourers during the period. A positive and direct relationship existed between wages and productivity. The compound growth rate of wages of agricultural wages was higher at 9.37 per cent per annum and that of foodgrains productivity was 4.1 per cent. The consumer prices for workers in factory employment increased at a rate (8.87 per cent per annum) higher than those for agricultural labourers (7.6 per cent). Generally wages increased at a higher rate compared to wholesale prices of agricultural commodities whose rate of increase varied between 7.7 and 9.7 per cent between 1971 and 1992. To improve the standard of living of agricultural labourers, it is necessary to pay them better wages and the productivity in the agricultural sector needs to be increased through efficient use of resources and by carrying out problem-oriented research.

Pattern and Level of Non-Agricultural Employment - An Economic Study of Rural Cottage Industries in District Mirzapur, Uttar Pradesh

Babu Singh, D.S. Shukla, S.R. Yadav and Birendra Kumar†

The paper seeks to examine (i) the family structure of and working population in sample households, (ii) the pattern and level of employment and income of the workers engaged in various rural cottage industries and (iii) the output-capital and employment-capital relationships of the sample households. For the study, 48 rural industries/rural industrial households were selected randomly from two blocks in Mirzapur district of Uttar Pradesh. The absorption of most of the increase in labour force in agriculture lies in the development of rural cottage industries which, besides providing employment and income, are supposed to develop a sound base for the rural economy as whole. The rural cottage industries selected for study are woollen dari making, wooden furniture making, pottery industry, making of red soil toys and wooden toys, glass beads and channel gate.

It was noted that the average size of family of different rural industrial households varied from 6 to 6.60 members, having 1.80 to 2.30 adult workers in different rural cottage industries. Total employment in rural cottage industries varied from 490 days to 621 days per household per annum. The employment days on per household basis were comparatively lower in pottery, in making of red soil toys and wooden toys because of smaller number of adult workers, while it was higher in some industries like woollen dari, wooden furniture, glass beads and channel gate making industries, due to comparatively more number of

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workers. As regards per worker employment, it did not show much variation and it ranged between 265 and 276 days in different rural cottage industries. The operational cost for different industries varied from Rs. 18,113 to Rs. 24,740 while the gross income varied from Rs. 25,120 to Rs. 38,236 per industry/household per annum and the net income varied from Rs. 17,000 to Rs. 23,500 in different rural cottage industries.

There existed positive relationship between output and capital in all units. An increase of one rupee in capital resulted in an increase of output of Rs. 0.96 to Rs. 1.36 in different rural cottage industries. In the case of employment-capital relationship, all the rural cottage industries under consideration showed a significant increase in the number of man-days of employment with the increase in capital. The increase in employment was found to be the highest in wooden toys, followed by red soil toys, wooden furniture and glass beads. Thus the rural cottage industries have great potential for providing employment and income to the rural population. It is, however, necessary to provide adequate raw materials, industrial training, adequate finance, marketing facilities and to improve production technology and proper instrumental facilities.

Rural Non-Farm Employment in Karnataka

S.T. Bagalkoti*

The paper seeks to analyse cross-sectionally the structure of rural non-farm employment (RNFE) in the districts of Karnataka and examine the factors affecting RNFE. The specific objectives of the study are to examine (i) the nature and volume of RNFE in the districts of Karnataka, (ii) its gender composition and (iii) the factors affecting RNFE. The 1991 census of Karnataka and other published documents are the major sources of data.

It is observed that RNFE in Karnataka is still insignificant, though diversification is taking place in favour of manufacturing and services. Hardly 18 per cent of males, 11 per cent of females and 16 per cent of all workers were employed in rural non-farm sector. The study identifies Bangalore (U), Dakshina Kannada, Uttara Kannada, Belgaum and Hassan as relatively developed districts. But most of the districts are classified as backward. Further, female participation in RNFE is generally lower than that of males. However, in many districts, female participation was higher than male participation in household manufacturing, processing and servicing, suggesting the preference of women to work indoors.

Among the selected factors expected to affect RNFE, degree of urbanisation, literacy levels, level of general non-agricultural development of a region, are found to have a strong association with RNFE. Contrarily, government expenditure, agricultural modernisation, land-man ratio and landlessness are found to have not so a significant association. The females show greater tendency towards NFE. The study shows that the 'pull' factors are stronger than the 'push' factors and it is concluded that RNF sector is not a 'residual' sector in Karnataka. But the results could change if 'secondary' workers are also included.

The policy implications of the study are: (i) Setting up of non-farm activity units in identified growth centres or bigger villages would increase the scope of RNFE. (ii) Expansion

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of literacy efforts would also increase participation of workers in RNFE, especially of women. (iii) Government spending has to be stepped up in the provision of economic infrastructure rather than in agri-related activities. (iv) Agricultural modernisation should be speeded up for giving further impetus to RNFE. (v) For enhancement of the status of female workers in particular, the promotion of RNFE is essential.

Rural Non-Farm Employment in Madhya Pradesh

Narayani Shrivastava†

Based on analysis of secondary data, the paper attempts to examine the growth rates of agricultural and non-agricultural employment, proportion of rural workers engaged in non-farm activities, the distribution of rural non-farm workers among household industries, non-household industries and other non-farm activities, distribution of rural main workers according to industrial categories in Madhya Pradesh and participation rate of men and women in non-farm activities in the state vis-a-vis all-India.

The compound growth rate of employment (person-days) in the rural sector was 0.29 per cent during 1973 to 1991. It was 0.13 per cent for the agricultural sector and 1.9 per cent for the non-agricultural sector. For the state as a whole, non-farm employment showed an increasing trend.

In Madhya Pradesh, the total rural workers engaged in non-farm activities formed 11.92 per cent of the total main workers in rural areas in 1991, which was lower than the all-India average. The rate of participation of female workers in non-farm activities was about 5.8 per cent of the total rural female workers in Madhya Pradesh which was lower than that of the all-India. Male workers engaged in non-farm activities constituted 14.8 per cent of the total rural male workers. The number of male workers engaged in non-farm activities was five times more than female participation in non-farm employment in rural Madhya Pradesh.

Among the non-farm activities, the share of manufacturing (category V) in rural employment was 3.8 per cent of the total. Trade and commerce and livestock and forestry (categories III and VII) are the other main non-farm activities in Madhya Pradesh, accounting for 2.8 per cent of total employment of rural workers. The distribution of rural non-farm workers engaged in household and non-household industries showed that the percentage of workers in household industry was higher in 1971 but showed a declining trend in 1991 and workers engaged in non-household industries showed in increasing trend both at the state and all-India levels. In 1991 workers engaged in non-household industries were about 2 per cent higher than those in the household industries.

In comparison to other states of India, Madhya Pradesh accounted for a very low proportion of rural non-farm workers. It may be due to low degree of commercialisation and urbanisation, lower literacy rate, lack of transport and communication facilities and lack of financing in Madhya Pradesh in comparison to the advanced states of India.

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Non-Farm Employment and Rural Economic Transformation in India

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The paper examines the role played by men and women in the process of rural economic transformation of India during the period 1981-91. Inter-sector or inter-farm sector shifting of labour occurs with the transition of the rural economy. More the non-farm activities, more is the growth of secondary and tertiary sectors, and expectedly, more the rate of participation of labour in the non-farm activities. It is thus expected that with the transformation of the rural economy the percentage share of farm sector in total rural main workers would decline (fall in disguised unemployment), resulting in a rise in the percentage share of the non-farm sector.

The analysis reveals that during 1981-91 the non-farm sector has exhibited increases in its shares for male workers everywhere in India: non-farm employment for males has increased at the cost of farm employment. But its rising trend for females is observed only in four states, Kerala, West Bengal, Tripura and Tamil Nadu. The non-farm sector obviously has played a distinct role in the transformation of India's rural economy. The tertiary sector has increased every where in India for both sexes while a downward trend is observed in the share of secondary sector. The absorption of rural male workers in the tertiary sector is more than that of rural female workers everywhere in India. But the reverse has happened in the secondary sector only in Kerala, Punjab and West Bengal. The sectoral distribution of rural main workers has also changed.

The disaggregative analysis of rural main workers in West Bengal reveals that the occupational distribution for both sexes among cultivators, agricultural workers, household industry workers and other workers has changed. The rising share of cultivators for females is indicative of the fact that the rural female workers have improved their economic status so far as the land asset is concerned. Furthermore, a clear upward trend is observed in the share of household industry workers for both males and females. Thus rural male workers have played a definite role in the transformation of the rural economy of West Bengal. The analysis of rank correlation between rural literacy rate and rural participation rate reveals that the districts which have high literacy rate for both males and females have high participation of rural male workers in the non-farm activities of the rural economy.

Non-Farm Employment Pattern of the Bauris (Scheduled Caste Community) of Puri District (Orissa)

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The paper attempts to analyse the extent of departure of the workforce from the traditional farm employment, the magnitude of open unemployment, under-employment and their

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consequent impact on income distribution of the sample households belonging to the Bauri (scheduled caste) community in Puri district of Orissa. Using multi-stage stratified random sampling technique, 117 Bauri households were selected from three blocks of the district, representing high, medium and low irrigated regions respectively. The results of the study showed that in the absence of strong resource base, skill and the desired attitudinal change, occupational diversification of the workforce of the Bauri community was at its infancy stage, since the largest proportion of total employment came from farming either as wage earners or as owner cultivators of tiny land holdings. However, in the case of the low income group, livestock rearing (23.55 man-days), collection and sale of firewood and forest products (17.71 man-days) and non-agricultural labour (14.04 man-days) contributed relatively a larger chunk of the total non-farm employment, while trade and commerce and service sector just made a beginning in providing some amount of productive employment to the labour force. In the case of middle income bracket, on the other hand, services in the private sector (31.67 man-days), collection and sale of firewood and forest products (24.61 man-days), trade and commerce (16.43 man-days) and non-agricultural labour (15.78 man-days) made some head way in providing relatively higher level of non-farm employment to the workforce. Therefore, professional household occupation and livestock rearing and other allied activities made a marginal contribution in this direction. In the case of high income group, the service sector (60.33 man-days), followed by agricultural labour (23.99 man-days) contributed equally marginally to the total non-farm employment. As such, in all the cases though there was a departure from the professional household occupation, the dependence on traditional farm activities played a key role in providing employment to the workforce. The indicators defined to measure full employment supported the existence of greater degree of under-employment since the employment days per worker was less than the workers intended to work (300 days a year) under the existing working condition and wages. Though open unemployment was conspicuous by its absence in the case of earners, it was a common feature for earning dependents, especially the female adults.

In the absence of desired occupational diversification, the income from non-farm sources constituted 19 per cent of the total income in the case of low income group, 136.56 per cent in the case of middle income group and 4.83 per cent in the case of high income group. Of the total non-farm income, the share of service sector in the case of high income group was quite substantial, followed by trade and services, whereas in the case of middle and low income groups, it was the non-farm employment and trade and commerce, which contributed a larger proportion of the total non-farm income. The policy suggestion that emerges from the study, therefore, calls for strengthening of productive resource base of the Bauri households, development of entrepreneurial skills supported by financial and technical assistance to bring about an occupational diversification and reduce the intensity of under-employment of the workforce.

Non-Farm Employment among Rural Women (A Case Study of TRYSEM)

Vidyulata,* R.K. Punia* and V.P. Chahal**

The paper attempts to make an inventory of the skills possessed by the rural women, their kind of employment and barriers for adoption of self-employment, to examine the nature of their employment for income generation and the distribution of the self-employed as per their trade and to analyse the pattern of time use and problems faced by self-employed women in Hisar district of Haryana State. A sample of 275 women trained under Training of Rural Youth for Self-Employment (TRYSEM) scheme and a matching sample of equal size from the same locale were selected for the purpose of study. The primary data were collected by administering a pre-tested semi-structured respondent schedule. It was found that both the beneficiaries and non-beneficiaries possessed traditional skills related to food preservation and processing (54.5 per cent of the beneficiaries and 58.9 per cent of the non-beneficiaries), sewing (25.45 and 21.45 per cent), crochet (7.27 and 5.45 per cent), decoration items with plastic ware (9 and 8 per cent), fan making (5.45 and 4.36 per cent), cotton spinning (14.54 and 16.36 per cent), etc. However, the skills required in the modernising society like typing, brassiere manufacturing, dyeing and printing, machine knitting and hosiery, handloom and punja durri were mainly found among the beneficiaries of TRYSEM programme. The number of beneficiaries (43.63 per cent) who were trained in employment relating to income generating activities was relatively larger than the non-beneficiaries (33.81 per cent). It was found that in income generating activities of an entrepreneurial nature the number of beneficiaries in self-employment was more (43 per cent) than the non-beneficiaries (32 per cent). Similarly, the number of beneficiaries in wage employment on the basis of skill was larger than the non-beneficiaries. There was domination of trained women (18.90 per cent) in the sample for self-employment as well as in technical trades like machine embroidery, machine knitting and handloom. Self-employed non-beneficiary respondents constituted only 10.90 per cent of the respondents. A majority of them were engaged in sewing clothes, and knitting and hosiery. However, only 14 per cent of the beneficiaries were self-employed and 1.45 per cent of them earned income from wage employment in trades under TRYSEM, which clearly shows the gap between the desired aim of the programme and field realities. Self-employed beneficiaries, on an average, utilised 202 man-days in income generating activities whereas non-beneficiaries utilised about 133 man-days, indicating utilisation of more time by the beneficiaries which might have been at the cost of other activities and their leisure time. When the beneficiaries were asked the reasons for not starting their own enterprise even after getting training, a large majority (about 94 per cent) of them reported that they were not asked or contacted by anybody to start their work. Thus follow-up and motivational aspects were not looked after. Another serious barrier was poor access to financial resources (57.46 per cent), followed by lack of interest on the part of beneficaries (24.86 per cent). The major problems being faced by the

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self-employed beneficiaries were poor remuneration, inadequate finance and inadequate skills. The programme has helped in providing training and skill for adoption of non-farm self-employment to the rural women but its achievement has not been to the desired extent. There is an urgent need to look into the appropriateness of training, qualitative aspects of training and the strategy for motivating entrepreneurs.

Possibilities of Income and Employment in On-Farm and Non-Farm Activities: An Economic Evaluation

Satyendra P. Gupta†

A study was undertaken in Raipur district in Chhattisgarh region of Madhya Pradesh with a view to examining the extent of employment in and income from on-farm and non-farm activities in different categories of farms. The study is based on data collected from 60 farmers from six villages of two blocks in Raipur district during 1993-94. It is revealed that the leased-in land was decreasing as the size of holding increased. The cropping intensity was found to be 144 per cent, 157 per cent and 142 per cent on marginal, small and medium farms respectively. Whereas the work done by male and female members on their own farms was increasing, the employment gained by them in other farms decreased with an increase in the size of holding. On an average, the employment gained by them at their own farms was 90.47 and 74.58 labour days which accounted for 65.45 per cent and 76.30 per cent of the total work done in agriculture respectively. The average wage rate in agriculture was estimated as Rs. 23.36 and Rs. 16.25 per day for male and female labour respectively.

Whereas construction along with private and government services provided a good opportunity of employment to marginal farmers, carpentry and government jobs were the main sources of employment for medium farmers. Small farmers were only engaged either in construction work or in government jobs. The total non-farm employment was estimated at 183.42, 113.62 and 241.20 labour days per annum for marginal, small and medium farms which accounted for about 59 per cent, 48 per cent and 60 per cent respectively of the total (on-farm and non-farm) employment. The per person total employment was about 132, 113 and 122 labour days in a year for marginal, small and medium farms respectively. The wage rate varied from Rs. 36 to Rs. 51 per day in different kinds of jobs depending upon the skill in the work and the type of work done. The amount received in government jobs was more than Rs. 55 per day while this figure was only Rs. 20 per day in private jobs.

The per farm crop income was estimated as Rs. 4,937, Rs. 9,471 and Rs. 14,520 and the per farm total on-farm income was about Rs. 7,209, Rs. 10,724 and Rs. 15,521 for marginal, small and medium farms respectively. The corresponding total non-farm income was Rs. 6,641, Rs. 6,033 and Rs. 12,955 which were about 48 per cent, 36 per cent and 45.5 per cent of the total (on-farm and non-farm) income respectively. Though the contribution of non-farm employment to the total employment was estimated at more than 50 per cent, however,

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per person total employment could not be increased beyond 123 days in a year. Moreover, the involvement of female members in non-farm activities was very less. It is suggested that the per person total employment may be increased if some small scale and/or cottage industries could be established at village level where female labour could also get some non-farm employment in addition to existing on-farm employment. The on-farm employment can also be increased if the area under *rabi* cultivation and the productivity of different crops could be increased on these farms. The implementation of wage rates announced by the government is also needed in order to improve the economic conditions of these farmers.

Non-Farm Occupation and Employment in Himachal Pradesh

Virender Kumar and J.S. Guleria*

The paper attempts to study and compare the structure of employment in the agricultural and non-agricultural enterprises in Himachal Pradesh and to examine the changes in the pattern of employment in the non-agricultural sector in the different districts of the state over a period of ten years from 1980 to 1990. The study shows that the total number of enterprises increased over the period with a simultaneous increase in the non-agricultural enterprises, though the increase in agricultural enterprises was not much. With the increase in the number of non-agricultural enterprises, the employment of persons usually working has also increased over the period. A reverse trend was observed in the case of the agricultural sector. Amongst the non-farm enterprises, the manufacturing sector emerged as the most important though its share decreased over the period. Wholesale and retail trade were next in importance. These three enterprises accounted for 85 per cent of the total OAE (owned) enterprises in 1980-81 as against 73 per cent in 1990-91. The same was the case in a majority of the districts of the state. In terms of employment, manufacturing was the most important enterprise in 1980 while in 1990, community, social and personal services emerged as the major source of employment. It is concluded that as the number of non-agricultural enterprises and the employment of usual labour force have shown an increase over the period, these enterprises need more development in terms of management, etc., to attain full utilisation of the increased labour force and to avoid the under-employment of labour.

Role of Non-Farm Sector in Generating Employment and Income in Different Farming Systems of Himachal Pradesh

B.R. Sharma, R.S. Kanwar and S.R. Sharma†

The paper seeks to analyse the pattern of farm and non-farm employment and income in different farming systems existing in Himachal Pradesh. The study is based on the data collected from various research studies conducted by the Agro-Economic Research Centre, H.P. University, Shimla during the years 1990-93 in various agro-climatic regions of the

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state. In the present study three main farming systems, namely, remittance-supported mixed farming in the low hills, vegetable-based farming in mid hills and fruit-based farming commonly found in high hills were considered for detailed analysis. The study reveals that there exist significant differences in the extent of non-farm employment in different farming systems under study. The proportion of non-farm employment in total employment was about 33 per cent in remittance-supported farming system, 49 per cent in vegetable-based farming system and 51 per cent in fruit-based farming system. The share of wage labour was relatively higher in the case of remittance and vegetable-based farming systems. While services and other activities in the non-farm sector accounted for a major share in total employment in the case of fruit-based farming system. An inverse relationship was observed between the farm size category and the proportion of employment generated from the non-farm sector in the remittance and vegetable-based farming systems. On the other hand, the income generated from the non-farm activities accounted for about 69 per cent in remittance-based farming system, 45 per cent in vegetable-based farming system and about 53 per cent in the case of fruit-based farming system. The analysis of returns per labour day in farm and non-farm activities revealed that it was relatively higher in the case of non-farm activities as compared to the farm activities. The returns per labour day in non-farm activities worked out to about Rs. 39, Rs. 44 and Rs. 66 in remittance-supported, vegetable-based and fruit-based farming systems respectively.

Non-Farm Employment in Ghaziabad District of Uttar Pradesh

S.P. Upadhyay, B. Singh, and R.G. Upadhyay*

In this paper an attempt has been made to present a comparative picture of employment generated in farm and non-farm sectors in Ghaziabad district of Uttar Pradesh. A survey was undertaken covering a sample of 100 rural labourers, stratified into two strata of without and with land, selected randomly from ten villages of Simbhaoli block in the district. The study revealed that the rural labour force in both the strata (without and with land) got the maximum employment in wage labour in general and farm labour in particular. Though activities related to non-farm wage work accounted for about one-fourth of employment days, non-farm wage employment provided sustenance to the rural labour in periods of their idleness. Self-employment in crop and milk production activities is also found important, which accounted for 19 per cent of the total employment days. Despite all the measures taken by the Government for generation of rural employment since the seventies, the rural labourers got employment for 77 per cent of the days only which restrains amelioration of their economic condition. Therefore, measures should be taken to ensure creation of more employment days in the non-farm sector. Further, dairy development particularly through Operation Flood scheme should be extended to provide them independent source of employment which can ensure full employment for the rural poor and help to improve their economic condition.

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Some Aspects of Rural Non-Farm Employment

K. Sain†

The paper attempts to examine (i) the nature of changes in rural non-farm employment in the country as a whole, (ii) the extent of rural non-farm employment at the state and Union Territory levels and (iii) the factors relating to occupational shifts from agricultural to non-agricultural employment and some related issues. The data for the study were collected from National Sample Survey (NSS) data over various rounds and from other published sources. The results show that there has been a discernible shift in rural employment at micro level from farm to non-farm occupations largely under the process of technological transformation and secular economic regeneration. A variety of new non-farm activities based in the villages and rural hinterlands are now increasingly pursued as the main occupations by the rural workers. The four quinquennial annual surveys of the National Sample Survey Organisation covering 1972-73 to 1987-88 have brought out that the major agro-based non-farm sectors like manufacturing, construction and services recorded a significant increase in the proportion of rural workers, both males and females, engaged in them over these years at the all-India level and also at the level of states and Union Territories with very wide variations in the rates of changes in rural non-farm employment at the regional level. The observation of wide regional variability from sample survey data is substantiated by quantification of regional level data through estimates of such statistics as standard deviations and coefficients of variation. The decrease in difference between current weekly status employment and current daily status employment, especially, for the rural male workers during 1972-73 to 1987-88 both at the all-India and state and Union Territories levels indicates a decline in under-employment for the employed rural workers over these years. The rural male workers had more opportunities of regular employment than their female counterparts both at the all-India and regional levels with substantial variation between the states and Union Territories in this respect over this period. The observed employment elasticity for rural non-farm sections of industry being reasonably high and technological and secular processes favouring their growth, the rural non-farm sectors of industry deserve a better and more comprehensive promotional policy in the years to come.

Off-Farm Employment: Present Scenario and Future Strategies in Himachal Pradesh

C.S. Vaidya, C.S. Nadda, N.K. Sharma and T.R. Sharma*

It is generally recognised that the labour absorption capacity of Indian agriculture has declined because of the fall in the elasticity of employment in this sector. As a result, the off-farm sector in our country has attracted attention in recent years as it has performed an increasingly significant rural income augmentation function. The paper attempts (i) to study

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the existing scenario of off-farm employment in Himachal Pradesh and (ii) to chalk out the strategies for enhancing the off-farm opportunities in the state. The study is based on secondary data collected from various published and unpublished sources of the Government of Himachal Pradesh and Agro-Economic Research Centre, H.P. University, Shimla.

The study reveals that about 67 per cent of the total workers are mainly employed in agriculture. Although the proportion of non-agricultural workers in total workers' population has increased from 24 to 33 per cent during 1971-91, it is not enough to absorb the fast growing labour force in the state. The sectorwise employment pattern also shows the predominance of the primary sector as it accounts for about 69 per cent of total employment, followed by the tertiary sector (about 21 per cent) and secondary sector (about 9 per cent). Most of the agricultural workers are cultivators and are disguisedly employed. The extent of over-use of human labour was about 24 per cent in wheat and about 36 per cent in maize production in the state. The employment pattern varies in different agro-climatic conditions of the state and also across farm size categories. The workers in the mid and high hill zones are dependent on agriculture to a greater extent than those in the low hill zone of the state. The marginal farmers are comparatively less dependent on the farm sector for employment due to scarce land resources than the small farmers. The off-farm activities are predominantly the domain of males as about 40 per cent of the male workers are engaged in these activities. Contrary to this, only about 9 per cent of female workers are employed in off-farm activities. Thus there is an urgent need to diversify the rural economy of the state by generating off-farm employment to the rapidly growing rural labour force. In Himachal Pradesh, there is enough potential for off-farm employment in the form of infrastructural development, establishment of large scale (hydro-electric and cement) and small scale industries (agro-based), cottage industries, tourism, etc.

Factors Affecting Shift of Occupations from Agriculture to Non-Agriculture at Farm Level (A Case Study in Allahabad District)

D.K. Singh and S.P. Tripathi†

An attempt has been made to ascertain the process and factors affecting shift of occupations from agriculture to non-agriculture at the grassroot level in Phulpur tehsil of Allahabad district. Allahabad is the most agriculturally progressive and industrially developed district of Uttar Pradesh. A sample of 65 families belonging to three categories of farms, viz., marginal (49), small (8) and large (8) were selected randomly from two villages of Phulpur tehsil of the district. The reference period of the study is 1994-95 while 1984-85 was taken as the base year for comparative analysis. The total population of the selected families was 545 in 1994-95 of which 55 per cent were workers against 56 per cent in 1984-85. The percentage of workers decreased with the increase in the size of farms. The main occupation of 37 households was agriculture, followed by profession and labour, being

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17 per cent and 15 per cent respectively in 1984-85 while the service and trade were the main occupations for only 5 and 2 households respectively in the same year. The analysis reveals that there was a shift in the occupation of households engaged in agriculture in favour of trade, services and professions in 1994-95. Maximum shifts had occurred on large farms, followed by medium and marginal farms. To identity the factors influencing the occupational shift from agriculture to non-agriculture, an opinion survey was conducted among the selected households. The modernising forces on agricultural development, rural financial institutions, demographic and social behaviour and expansion of business activities in the rural areas led to a significant change in the occupational structure among different communities of the society. Increase in the level of education, enhancement in per capita income, decrease in per capita availability of cultivated land were the main causes for the occupational shift from agriculture to non-agriculture in the case of upper caste and large farmers. Agriculture being a most risky business, less remunerative and irregular source of income, the small farmers tended to leave this occupation and switch over to non-farm activities.

So far as the marginal and landless workers are concerned, mechanisation, industrialisation and urbanisation are the major causes for the displacement of labour force from agriculture to the non-agricultural sector. Lower wage rate, irregular and seasonal employment and exploitation of workers in the agricultural sector are also responsible for diversification of occupational structure. Small and tiny industries provided alternative sources of employment in the rural areas. The unemployed educated youth of different castes do not like to involve themselves in agriculture and allied activities. Therefore, there is need to set up small scale industries in the rural areas.

Real Wage Differential in Non-Farm Occupation among Agricultural Labour Households in India

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The paper attempts to (i) to study the trends in average real wage earnings of agricultural labour in the non-farm sector, (ii) to examine the changes in the pattern of real wage earnings of agricultural labour and (iii) to work out the wage differentials in non-farm and agricultural occupations for agricultural labour. The study is based on secondary data collected from National Sample Survey for the years 1956-57, 1964-65, 1974-75, 1977-78, 1983 and 1987-88 for agricultural labour only. The daily real wage earnings are worked out with the base year 1960-61 = 100. The analysis covers 16 major states and India as a whole. The study revealed that the real wage earnings in the non-agricultural sector did not show a specific trend. The daily real wage earnings for male labour in 1956-57 were less than one rupee in most of the states except in Punjab where these were significantly high (Rs. 2). In 1987-88, these earnings were found to be greater than one rupee in all the states whereas in Punjab it was found to be Rs. 2.34. The daily real wage earnings of female labour in 1987-88

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were less than one rupee in four states. The earnings were the highest in Assam. The earnings of child labour were the lowest in Orissa (Rs. 0.65) in 1987-88 whereas these were the highest in Kerala (Rs. 1.72). On all-India basis, the average daily real wage earnings for male, female and child labour were Rs. 0.99, Rs. 0.66 and Rs. 0.55 in 1956-57 and these were Rs. 1.45, Rs. 1.08 and Rs. 0.92 respectively in 1987-88. The study has shown that the percentage increase in real wage earnings for male labour was the lowest in Karnataka (12.70 per cent), followed by Assam (13.66 per cent). For female labour Assam recorded the largest increase (188.71 per cent). The lowest change was observed in the case of West Bengal. A decline in real wage earnings was noted in the case of child labour in Bihar and Rajasthan. In all the states and in all the years under study the daily real wage earnings were higher for male labour than for female labour. The differential was found to be the highest in the case of Punjab in 1956-57 which persisted in 1987-88 also but with a substantial reduction in the disparities. In Gujarat the disparity in daily real wage earnings between male and female labour was the minimum, followed by Assam. On all-India basis it was noted that the real wage earnings of female labour continued to show a positive trend with a reduction in disparity compared with their male counterparts except in 1977-78.

The comparison of real wage earnings in non-farm and agricultural sectors showed that in general these were higher in the non-agricultural sector both for male and female labour over the period of study except in the case of Punjab. The disparities were found to be more pronounced for female labour. In Kerala and Tamil Nadu the earnings from the agricultural sector for male labour were marginally higher in 1987-88. A significant fall in the earnings from the non-farm sector was observed for female labour in Jammu and Kashmir in the same year. The ratio of non-farm to agricultural daily real wage earnings on all-India basis for male labour was 111.11 in 1956-57 which declined to 108.28 in 1987-88 whereas for female labour it was 104.91 and 112.96 for 1956-57 and 1987-88 respectively. This shows that there is substantial scope for generation of employment in the non-farm sector.

Non-Farm Rural Employment for Women in Three Tamil Nadu Villages: A Case Study

D.K. Oza and K.G. Rama†

The paper presents a case study of a project undertaken from June 1994 to generate non-farm employment and income for a group of rural women at the Kasturba Kushta Nivarana Nilyam, Malavanthangal P.O., VRP district in Tamil Nadu. The project received financial support from the United Nations Development Programme (UNDP) and ancillary status from Pond's India Ltd. The project involves making of leather shoe uppers for women's footwear intended entirely for export. Pond's India Ltd. supplies all the raw material, gives the training, picks up all the finished products and pays wages based upon

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productivity. The project has the potential for employing from 30 to 100 women round the year. It can generate an annual rural income of approximately Rs. 10 lakhs. It is concluded that rural non-farm employment, especially for women could be guaranteed more easily if a group of women are recognised as an ancillary to modern urban industry. It is recognised that such projects will have to be designed on modern lines.

Employment Potential of Inland Fisheries in India

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The study examines statewise inland fisheries resource areas and their production and evaluates the unexploited areas and production potentials with their employment prospects for the rural masses at the state and all-India levels. The study is based on the secondary data extracted from *Handbook on Fisheries Statistics*, published by the Ministry of Agriculture, Government of India and pertained to the period 1980-81 to 1992-93. Most of the states have riverine, reservoir and aquacultural (tanks and ponds) resources, while the flood plain lakes (beels, oxbow lakes, etc.) and brackish waters are located in specific states. Mainly, the riverine resources are in Uttar Pradesh, Jammu and Kashmir and Madhya Pradesh; reservoirs in Maharashtra, Madhya Pradesh and Orissa; tanks and ponds in Andhra Pradesh, Karnataka and West Bengal; flood plain lakes in Tamil Nadu, Orissa and Assam; and brackish waters in Orissa, Kerala and West Bengal. One-third of the inland fish production has been from West Bengal, followed by Bihar (10 per cent), Andhra Pradesh (8.5 per cent) and Assam (8 per cent). Most of the states reported an upward trend in inland fish production with Haryana recording the highest annual compound growth rate, followed by Punjab, while Tamil Nadu, Rajasthan and Nagaland reported negative values. The study revealed the highest production and employment potential for aquaculture, followed by brackish waters and flood plain lakes. The capture fishery waters are mostly over-exploited, but have limited scope for additional employment in the cold water region. The reservoirs are the multipurpose irrigation or hydro-electric projects adopted for fishery operations. The projections for area and production potentials for reservoirs are much higher than the existing level, thereby providing immense scope for adoption of fisheries and for generation of rural employment. The number of fishermen engaged in inland fishery activities accounted for one-third of the potential, leaving the services of two-thirds untapped. In addition, the utilised resource area and the existing yields are far below the potential level. Measures have been suggested to harness this potential gap for different resources. It may have a multiplier effect on employment as it requires more and more labour for post-harvest activities also. It is suggested that the resourcewise potential states should formulate location-specific plans for development and employment generation.

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A Study into Non-Agricultural Employment in Rural India

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The study attempts to examine the shifts in occupational distribution in India, pattern of and factors affecting non-farm employment at the state or regional levels, trends in nominal and real wages with special reference to Punjab and the nature of inter-linkages between agricultural and non-agricultural sectors. It has been found that there is a distinct trend towards non-agricultural employment although there are significant differentials according to gender and region. Further, the study shows that the growth in non-agricultural employment is more due to the push of poverty and marginalisation than due to the pull of prosperity. Fortunately, the supply curve of labour has started showing an upturn and both backward and forward linkages are growing in strength. In Punjab, the strength of the income and employment multipliers has shown a tendency to increase, clearly indicating the growing inter-dependence of agriculture with industry.

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