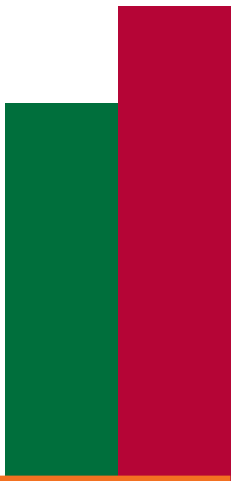


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Markets, Institutions and Policies



Labor-Market Participation in Semi-Arid Tropical Villages of India with Specific Reference to Gender

VR Kiresur, SK Chandrakala, VK Chopde, Y Mohan Rao and MCS Bantilan



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**International Crops Research Institute
for the Semi-Arid Tropics**

2013

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1. Introduction

The issue of gender differentials in relation to farm productivity in subsistence farming has been of special interest from the standpoint of public policy in developing countries, as the difference is often viewed from the angle of human capital theory and measurement of discrimination. The role of rural women in agricultural development draws not only the attention of the academicians but also of the politicians, assuming that gender equality does matter for overall economic development and welfare measurement (Thapa, 2008). Over the past few decades, gender and development issues have attracted the attention of policy-makers, international organizations and economists, among others. Governments have targeted programs devoted to the formulation of public policies that incorporate gender issues. Most international organizations have integrated gender issues into their development strategies to enhance women's participation in the economic development process. In academic arenas, gender differences are often discussed with non-homogeneous characters and gender-specific constraints that might vary in terms of the productivity of men and women. The yield differences between males and females are due to gender-specific constraints such as land, labor, access to inputs (ie., fertilizers, modern variety of seeds, oxen and other farm equipment) and credit faced by female-managed farms in comparison to male-managed farms (Udry, 1996). Gender gaps in terms of labor market participation in the agricultural sector are common phenomena in many developing countries, where the determination of wage rates may be influenced by various factors, such as the size of population, the level of urbanization and the condition of physical infrastructure in the particular region. Such variation in wage rates may limit the labor market participation that often leads to gender discrimination in labor markets. An understanding of such variation as well as discrimination is a matter of interest among economists and policy-makers for finding the extent of gender differentials in farm productivity. The fact that women are generally less geographically mobile than men helps explain the significance of such local demand factors in the formation of their wages (Ryan, 1982).

Much of the reduction in rural poverty in India is surmised to have resulted from increasing real wages and decreasing real prices for food. In particular, the labor market scenario has changed dramatically between the first-generation (1975–84) and second-generation (2001–08) studies. During 1975–84, the market was segmented, with very little movement of labor between villages and towns. Using employment data from the quinquennial rounds of the National Sample Survey (NSS), a number of studies have examined the employment situation in India in the post-reform period, in comparison with that in the pre-reform period – for instance, Sundaram (2001a and 2001b), Chadha (2003), Sundaram and Tendulkar (2004), and Bhattacharya and Sakthivel (2005a). A major conclusion that one may draw from these studies is that there has been a marked slowdown in employment growth in India in the post-reform period compared to the pre-reform period, and that this slowdown has been relatively more marked in the case of female employment in rural areas.

Between 1975–2000, due to the uncertainty in finding daily-wage work throughout the year, laborers stayed in the villages to work as attached servants on annual contracts, even though the wage rate per day was lower compared to that in the daily-rated labor market. After 2000, labor markets have become interlinked and there is now greater mobility of labor. The practice of attached servants has withered away and labor has now been hired on a contractual or casual basis. Real wages have gone up much faster than the incomes of farmers. Non-farm employment has gained prominence, particularly in villages near towns, even though the government introduced

the 'Food for Work' and NREGA programs in the villages to stop out-migration. In this context, the present study attempts to analyze the labor market participation in farm and non-farm sectors, with specific reference to gender in the semi-arid tropical villages.

2. Methodology

The data pertaining to this study was used from the second-generation VLS in six villages of India, carried out by the Research Program on Markets, Institutions and Policies (RP-MIP) of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). The RP-MIP of ICRISAT has continued these studies in six locations, two in Andhra Pradesh, and four in Maharashtra, since the 2001–02 cropping year, from randomly selected households belonging to different farm-size groups, namely, labor, small, medium and large households using structured survey-modules.

ICRISAT has created a long-term panel data-set. Instead of including all the households of a village, these studies chose only a sample of them to conduct an in-depth study on the various aspects of farming and housekeeping. The resident investigators visited these households once in three weeks to collect data in order to minimize recall bias. The present analysis used the data collected through biannual surveys for the year 2007–08 from the Aurepalle (133 households) and Dokur (98 households) villages of Mahbubnagar district in Andhra Pradesh, the Shirapur (144 households) and Kalman (102 households) villages of Solapur district, and the Kanzara (63 households) and Kinkheda (55 households) villages of Akola district in Maharashtra. The first biannual survey was conducted after the rainy season (kharif) in December 2007, and the second after the post-rainy season (rabi) in June 2008.

Information was collected using 11 modules of survey instruments, of which mainly the 'VLS-K' (employment) module provided data for this particular paper. In this VLS-K module, individual members of the sample households furnished information about their participation in daily-wage employment in farm and non-farmwork during 2007–08. Data was also collected on the total employment days, wage rate and the total earnings from each individual of the selected household, both for farm and non-farm employment. Here, non-farm activity means any work which does not include skill, technique or education to perform the particular activity (such as the breaking of stones, brick-making, cable work, road construction, tree-cutting, etc). The analytical methods used in this basic report are mainly tabular: averages, weighted averages and percentages.

2.1. Labor Profile of Andhra Pradesh Villages

The Aurepalle and Dokur villages are located in the Mahbubnagar district of Andhra Pradesh. A significant proportion of households in this district are mainly dependent on labor earnings although they own small quantities of land. Migration of labor is rampant in this district, perhaps due to the non-availability of employment throughout the year. The productivity of crops has been low due to drought, pests and diseases, poor quality of soil, and poor economic condition of the farmers. Soils range from mostly shallow to medium-deep alfisols (red soils with relatively high aluminium and ferric content) with light texture. About 80% of the soils are poor in fertility and low in water-holding capacity, with hardly any chance of getting higher yields. Drought is experienced once every three out of five years, resulting in very low incomes from crops.

Crop operations such as land-preparation, sowing, transplanting, weeding, harvesting and threshing require a huge amount of human labor. Men are mainly involved in ploughing, puddling, harrowing and inter-cultivation operations, whereas women carry out sowing, transplanting and weeding operations. Both men and women participate in harvesting and threshing. Wage discrimination between the sexes exists in these villages, as men generally get higher wage rates than women, while children receive the same wages as women. Although the wages for women are only about 60% of that for men, the total labor earnings for women are generally higher than men because of higher participation rates.

The labor market is divided into a market for daily rated labor (DRL), where payment is made every day in cash or kind for a fixed number of hours worked (7–8 hours); and a market for permanent jobs or regular farm-servants (RFS), where a fixed payment is made once in a month or year.

The availability of both DRL force and RFS has declined in the Aurepalle and Dokur villages due to out-migration for non-farm activities and diversification of livelihoods. The area under rain-fed and irrigated crops declined, particularly in Dokur, due to climatic changes (drought, late rains and uneven distribution of rainfall) and non-availability of water in the resources (such as tanks, open dug wells and bore-wells). Both permanent and temporary migrations have been prevalent in both the villages. Out-migration gradually increased from 1990 onwards, particularly in Dokur village, due to persistent drought from 1997 onwards. Access to high-paying non-farm jobs in the nearby urban areas has encouraged out-migration. The availability of RFS has fallen from 120 in the 1980s to 10 in 2007, because of higher wage rate for DRL and the social stigma associated with RFS. RFS are sometimes not available even if the farmer is willing to pay ₹2,000 per month. Aurepalle and Dokur face labor shortage particularly during the months of June, July, October, November and December, when labor demand is at its peak. Non-farmwork has gained importance outside the village, particularly in Hyderabad, Goa, Maharashtra, Gujarat and Rajasthan. About 10 labor contractors in Dokur village transport the labor to long distances for non-farmwork, and provide ₹10,000–12,000 as an interest-free advance per person before migrating from the village. The labor contractor also provides free travel to and from the workplace as well as accommodation at the workplace. About 15–20% of the population in Aurepalle and 30–40% in Dokur is migrating out for employment. The decline in RFS and DRL, and the assurance of 100 days' employment under the NREGS has had a significant impact on wage rates in the village labor market. The wage rates for both men and women have increased over time in both farm and non-farm activities in these villages. Contract-type employment is increasing, as laborers get 50% better pay than the existing daily-wage rate. The farm workers prefer wages in cash rather than in kind. The existing wage rates are ₹55–60 and 95–100 per day for farm and non-farmwork in these villages, respectively.

Income from labor earnings constitutes an important segment in the total average household income. Labor income is derived from within and outside the village. Almost all households belonging to the labor and small- and medium-farm-size groups participate in the labor market. Most of the labor force comes from scheduled castes such as the Madiga and Mala caste households. During the first-generation VLS survey (1975–85), most of the labor worked within the village and out-migration for work was very limited, but the picture has changed considerably today.



2.2. Labor Profile of Maharashtra Villages

The Kanzara and Kinkheda villages are located in the Murtizapur taluka of Akola district in Maharashtra state. The soils of the district are 72% medium black, 11% deep black, and 17% shallow black. The annual rainfall ranges from 750–1000 mm. The maximum temperature reaches 48°C in May, whereas the lowest temperature is 8°C observed in the month of December. The irrigated area is less than 10% of the total cropped area. The main crops grown in the district are cotton, soybean, sorghum, pigeonpea, wheat, chickpea and groundnut. As many as 446 registered factories exist in the district, providing employment to 7,464 people in the region. Farming and farm labor are the main sources of income, contributing to more than 80% of the total household income in both the villages.

In 1970, both the villages were having surplus labor. In the landless-labor and small-household categories, at least one person per family worked as RFS for four months (June–September) in a year. This was done to get bullocks from the employer and secure advance wages. Laborers insist that the wages for the harvesting and threshing of sorghum, wheat and pigeonpea be paid in kind. From 1995 onwards, because of the availability of canal water for irrigation and the availability of grains from the PDS shop at low rates, laborers have been preferring wages only in cash.

Secondly, nobody prefers to work as RFS at present. The number of RFS came down from >60 in 1990 to <10 in 2008. Wage discrimination among sexes exists even now in both the villages. In general, women and child labor receive the same wages, which is about 60% of the men's wage rate. Now there is immigration of labor into Kanzara village during the peak period (from August to December). Farmwork is available throughout the year, except during the slack period in April and May. Existing wage rates per day for farmwork are ₹60–100 for men, and ₹40–60 for women and children. Around 20% of the labor goes for non-farmwork to nearby cities, earning ₹100–150/day for males, and ₹60–100/day for females. Very few laborers are engaged in caste-based occupations like that of a washerman, barber, carpenter, etc. In general, all types of castes participate in farmwork, whereas it is mostly laborers who are Muslims or are from scheduled castes who participate in non-farmwork.

The Shirapur and Kalman villages are located in the Mohol and North Solapur talukas of Solapur district in Maharashtra. The average rainfall of the district is 545 mm. Kalman falls under an assured rainfall zone, where post-rainy sorghum, pearl millet and pulses are grown. On the other hand, Shirapur, with shallow to medium-black soils, falls under an un-assured rainfall zone, and grows rainy and post-rainy season crops. From 1995 onwards, sugarcane has become the main crop in Shirapur village, thanks to the availability of canal water from Ujani dam. The temperature ranges from 14–42°C. The main crops grown in this district are post-rainy sorghum, pulses, sugarcane, pearl millet, wheat and groundnut. There are more than 4,000 registered factories, around 15 sugar factories and cotton mills, and more than 8,000 cooperative societies in this district. In Shirapur village, livestock contributes more than 20% of the household income. Most households have crossbred cows or she-buffaloes. Goat- and sheep-rearing also considerably add to the income of labor and small households.

From 1975–90, both villages had kharif fallow followed by rabi sorghum. Few farmers grew matki, kulthi, cowpea during kharif. Laborers were not getting enough work. The government started an employment guarantee scheme, which helped labor get sufficient wage-earning work. Merely farmwork being available in the village was not enough. Laborers used to go to nearby cities for non-

farmwork. Very few farmers had irrigation facilities, and they grew grape and vegetables in Kalman, and wheat and vegetables in Shirapur village.

After 1995, the number of crossbred cows in Shirapur village increased because of the availability of interest-free loans, open milk-collection centers in the village and cattle-feed availability from the dairy. Later, canal water has been made available for sugarcane, and a sugar factory was started in the village in 1999–2000. Now more than 300 laborers from Shirapur village work in the sugar factory, leading to a considerable increase in wage rates: for men, from ₹12/day in 1990 to ₹80 to 120/ day in 2008; and for women, from ₹8 in 1990 to ₹50–80/day in 2008 for farmwork. There is one poultry farm in the village. Because of good infrastructure facility in the village and the proximity of the latter to the city, more laborers are going to nearby cities for non-farmwork, compared to other VLS villages in Maharashtra, and are earning ₹100–150/day. Just as in Akola district, there is wage discrimination between the sexes in Shirapur, and even the number of RFS is decreasing in both villages.

3. Results and Discussion

3.1. Labor Market Participation in Farm and Non-Farmwork

The farm size of the household has an important bearing on its participation in the labor market. Hence, the labor market participation is studied by farm-size groups of sample households. Moreover, since rural laborers have been finding work in the non-farm sector too in recent years, this study segregates farmwork from non-farmwork in order to assess the relative importance of either type. Along with farm size, the gender pattern in the labor market also plays a crucial role, since the role of women in agriculture is quite critical. Certain field operations like hand-weeding and transplanting are traditionally performed by women. Similarly, men conventionally carry out operations like ploughing, puddling, pesticide application, etc. Some operations such as sowing, harvesting and threshing are performed by both men and women. However, the pattern of employment of male and female labor could be different in different locations. Generally, wage rates for women laborers are lower than for men, possibly because of their shorter working hours, the less strenuous operations carried out by them, or due to exploitative practices. Under these circumstances, the participation of the members of the labor force in the selected villages has been





analyzed in terms of participation rates, daily earnings and total earnings per annum by gender, farm-size category and location.

3.1.1. Aurepalle

On an average, a participant in the labor market in Aurepalle found 146 days of work per year and earned ₹71 (Table 1). A total of 180 persons participated in the labor market in this village. The number of participants in the village labor market was highest in the small (63) and labor (62) groups, followed by medium (43) and large (12) groups. Large households found the highest

number of workdays per person (166) as well as highest annual earnings (₹11,716), followed by labor, and small- and medium-farm-size groups. Labor and small households found more workdays in both farm as well as non-farmwork than medium households. This was because labor and small households had limited own landholding. In farmwork, labor and small households found 168 and 167 days (per person workdays), respectively, than the medium households (87 days). In case of non-farmwork, labor households found more workdays (144 days) and income (₹13,726) per person than the other landholding classes. On the contrary, a large household seems to have found more workdays in both farm as well as non-farm activities (166 and 167 days per person, respectively). Thus, the number of participants from both farm (nine members) and non-farm (three members) activities were relatively less than the other households, as a result of which, the average turns to be probably more.

Table 1. Labor market participation in farm and non-farmwork in Aurepalle (2007–08).

Class/ Gender	Farmwork (FW)				Non-Farmwork (NFW)				Overall (FW+NFW)			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	43	168	9,563	57	19	144	13,726	95	62	161	10,839	67
a) Male	3	240	16,007	67	13	164	17,100	104	16	178	16,895	95
b) Female	40	163	9,079	56	6	103	6,417	63	46	155	8,732	56
2) Small	42	167	9,637	58	21	129	13,092	102	63	154	10,789	70
a) Male	13	154	9,533	62	14	144	17,419	121	27	149	13,622	91
b) Female	29	172	9,683	56	7	99	4,439	45	36	158	8,663	55
3) Medium	25	87	5,043	58	18	130	12,923	99	43	105	8,342	79
a) Male	7	31	2,764	90	12	138	15,230	111	19	98	10,637	108
b) Female	18	109	5,929	55	6	116	8,308	72	24	110	6,524	59
4) Large	9	166	10,406	63	3	167	15,647	94	12	166	11,716	70
a) Male	1	350	33,300	95	3	167	15,647	94	4	213	20,060	94
b) Female	8	143	7,544	53	0	0	0	0	8	143	7,544	53
5) Total	119	150	8,703	58	61	136	13,365	98	180	146	10,283	71
a) Male	24	137	9,358	68	42	150	16,568	111	66	145	13,946	96
b) Female	95	154	8,537	56	19	105	6,285	60	114	146	8,162	56

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (₹)

The average daily earnings for the village as a whole were ₹71. Farmworkers received daily earnings of ₹58, while non-farmworkers received daily earnings of ₹98. The farmwork accounted for 52% of the total workdays, and contributed to 39% of the average earnings. As can be expected, the number of workers as well as workdays decreased with the increase in the size of landholding, perhaps because there was more work available on one's own farm as the farm size increased, and

also because it was not essential for the larger farmers, owing to their economic and social status. But this relationship was somewhat the opposite in Aurepalle village, as evidenced by the fact that large farmers found more workdays (166 days per person) than the other households and almost equal to labor households. However, in terms of the number of participants, only 12 members of large farm households participated in the labour market. Of course, labor and small households did find more workdays than the other landholding classes. Because of the low income from agriculture they had diverted their livelihood to other income-generating activities by greater participation in the labor market, availing government employment schemes like NREGS and other non-farm activities.

More women participated in the labor market than men in all the farm-size groups in Aurepalle (Table 1). Women invariably found more days of farmwork than men in small and medium households. Generally, most of the farm activities were done by female laborers, namely, hand weeding, sowing, cleaning, harvesting and threshing, etc. Female wage rates were invariably lower than that of males, and hence, most of the landholders employed female laborers than male laborers wherever applicable. But in the case of strenuous works, men found more workdays, and that too at a higher wage rate than women, both in farm and non-farmwork, such as mud work, tree-cutting, construction of buildings and roads, digging roads for cable work, etc.

Ryan, et al (1980) observed that women then comprised about half the total agricultural labor use in the south Indian SAT villages. Women participated in these daily labor markets more than men, although their average daily earnings (or wages) were much less. Ryan (1982) concluded that human capital variables such as age, education, experience, skill, and physical and nutritional well-being were found to be important factors explaining variations in wages paid to men in the daily labor-marketing villages of south India. Individual human capital attributes were not as important as demand factors such as the type of season, village characteristics, and the presence of nearby public works projects in explaining the wages of women. The fact that women are generally less geographically mobile than men helps explain the significance of such local demand factors in the formation of their wages.

It is evident from the past VLS studies that women received less wage rates than men. Ghodake and Ryan (1981) conclude that women might be paid less per hour simply because they were engaged in tasks which by their nature were time-intensive and did not require high levels of physical exertion. Similarly, Jacoby (1992) explained the gender differences in earnings and wage rates by the absence of perfect labor market that was likely to vary in the returns to schooling.

Across all household groups, male laborers were employed for an average of 137 days in farmwork and 150 days in non-farmwork. Female laborers, on the other hand, found 154 days of farmwork and 105 days of non-farmwork. Through labor market participation, male laborers earned an average of ₹13,946 per year and female laborers ₹8,162 per year. The overall average earnings per day were ₹96 for male labor and ₹56 for female labor. A part of this difference in earnings could be explained by the higher participation of male labor in non-farmwork where wages were relatively higher. The remaining difference could be attributed to differences in working hours, productivity and the convention of valuing male labor higher than female labor. Although government legislation provided for equal wages for men and women, they were more preached than practiced on private farms.

3.1.2. Dokur

Compared to Aurepalle, there were limited opportunities of work in Dokur because of persistent drought and fallowing of lands in the command area of the village tank and bore-wells. Because of low employment opportunities within the village, most members of the households belonging to labor, small- and medium-farm-size groups migrated to Hyderabad, Goa, Maharashtra and Gujarat, among others, for non-farm activities. A participant in the labor market in Dokur found 92 days of work and earned ₹7,379 per year at an average wage rate of ₹80 per day (Table 2), while non-farmwork opportunities were higher in all the classes of households. Average daily earnings for the village as a whole were ₹60 for farmwork and ₹96 for non-farmwork. The farmwork accounted only for 41% of the total workdays and 31% of the total average annual earnings.

Paddy was the main crop of Dokur, cultivated in both the seasons under the irrigated conditions (tank and bore-wells). In the rain-fed areas, castor and pigeonpea were cultivated. Due to the wild-boar menace and drought, farmers stopped growing groundnut, sorghum and finger millet in rain-fed lands, replacing them with castor and cotton. Due to persistent drought in the last 10 years in Dokur village, the area under paddy has drastically declined, and a majority of the households diversified their cropping pattern to include cotton and castor as well as their livelihoods from agriculture to include non-farm activities.

Table 2. Labor market participation in farm and non-farmwork in Dokur (2007–08).

Class/ Gender	Farmwork (FW)			Non-Farmwork (NFW)			Overall (FW+NFW)					
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	20	84	4,785	57	21	116	11,420	98	41	100	8,183	81
a) Male	6	57	5,483	96	11	150	16,135	108	17	117	12,375	106
b) Female	14	95	4,486	47	10	80	6,233	78	24	89	5,214	59
2) Small	30	78	4,386	56	35	117	11,817	101	65	99	8,387	85
a) Male	6	99	7,947	80	18	128	14,303	112	24	121	12,714	105
b) Female	24	72	3,496	48	17	104	9,185	88	41	86	5,855	68
3) Medium	32	81	5,068	63	33	107	9,456	89	65	94	7,296	78
a) Male	13	73	6,312	86	18	117	11,238	96	31	98	9,172	93
b) Female	19	86	4,217	49	15	95	7,318	77	34	90	5,585	62
4) Large	39	68	4,182	61	27	91	8,549	94	66	78	5,968	77
a) Male	13	55	5,278	97	11	109	12,077	111	24	79	8,395	106
b) Female	26	75	3,633	49	16	80	6,123	77	42	77	4,582	60
5) Total	121	76	4,566	60	116	108	10,313	96	237	92	7,379	80
a) Male	38	68	6,086	89	58	125	13,277	106	96	102	10,430	102
b) Female	83	80	3,871	48	58	91	7,348	81	141	85	5,301	63

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

Just as in Aurepalle, more women than men participated in the labor market in all the farm-size groups in Dokur (Table 2). In all the classes of households, female laborers were employed for farmwork on more days than men. But the availability of farmwork in Dokur village was relatively very low (about one half) compared to Aurepalle, because the area under crops drastically declined due to continuous drought and non-availability of sufficient water resources. A participant from Dokur could find hardly 76 days of farm employment opportunities, as against 150 days in Aurepalle. Further, in Aurepalle, more women than men were employed in farmwork in Dokur as well. In the case of non-farmwork, contrarily, men found more workdays than women in all farm-size groups. Both in farmwork as well as non-farmwork, daily wages were higher for men as compared to women. On an average, a male laborer received ₹89 and ₹106 per day, and female laborers received ₹48 and 81 per day, for farm and non-farmwork, respectively. Male laborers registered an average of 102 workdays as against 85 days by female laborers. The average earnings for men were ₹10,430 per year, but only ₹5,301 for women, probably because more men migrated in search of non-farmwork as compared to women. In other words, women laborers' average earnings were 51% of that of male laborers.

3.1.3. Shirapur

Shirapur offered the best opportunities for participation in the labor market among the six VLS villages, with 164 days of work per person (for both farm and non-farm activities) and earnings of ₹12,298 per year (Table 3), resulting in an average wage rate of ₹75 per capita per day. This was due to better irrigation facilities in the village. Non-farmwork accounted for 55% of the total number of workdays. Daily earnings from non-farmwork were quite high (₹122), which was higher than that from farmwork (₹61). However, the number of participants in non-farmwork was relatively less (36 persons) than in farmwork (144 persons). Interestingly, large farm-households found quite a large number of farmwork days (169 days per person), because they were quite experienced and skilful in some of the farm activities like sowing, transportation, etc. They found enough work opportunities in farmwork, and hence, no members participated in non-farmwork. In contrast, medium-size farm groups found lesser number of farmwork days (130 days per person) than the other household groups, but daily wages were quite higher than the other household groups. Even with regard to non-farmwork, medium-size farm groups found relatively lesser number of workdays (146 days per person) than other farm-size groups. However, daily wages were quite high (₹131) in the case of medium-size farmers for non-farmwork, because women from this group hardly participated in the labor market, while only men participated, and since wages were higher for men than women, the average wage rate turned out to be higher as well.

Thus, as farm size increases, the participation of labor in non-farmwork decreases and the earning per day increases. Ghodake and Ryan (1981) found that as farm size increases, the proportionate labor availability of male labor for crop activities increases, while that of female labor decreases.

In general, the participation of women in the labor market was lower in Shirapur than in the Mahbubnagar villages in terms of the number of participants (Table 3). In all the classes of households, the participation of men was more than that of women, except in the labor group, where it was other way around. Because of the scarcity of landholding, they had to depend on the labor market in order to feed their appetite. The number of women participating in the labor market was much less than that of men. This discrepancy was very evident in non-farmwork. No woman from medium- and large-size farm households participated in any non-farmwork. A few women from labor and small-farm households did so, but for far fewer days than their male counterparts.

In many parts of the rural areas, conventional factors still hinder women's participation in the rural labor market, such as the idea of prestige, beliefs and cultural issues. In all the farm groups, male laborers found higher daily wages in both farm as well as non-farmwork. Overall, a male laborer worked for 169 days and earned ₹16,191 per year in both farm and non-farm activities. In contrast, a female laborer found work for 158 days and earned ₹6,720 per year, accounting for just 41% of the male counterpart's share.

Table 3. Labor market participation in farm and non-farmwork in Shirapur (2007–08).

Class/ Gender	Farmwork (FW)			Non-Farmwork (NFW)				Overall (FW+NFW)				
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	52	184	9,995	54	15	210	25,536	122	67	190	13,474	71
a) Male	17	223	16,257	73	14	218	27,254	125	31	221	21,223	96
b) Female	35	165	6,953	42	1	108	1,485	14	36	164	6,801	42
2) Small	58	144	8,871	62	15	191	22,767	119	73	153	11,727	76
a) Male	29	141	11,532	82	14	195	23,622	121	43	158	15,469	98
b) Female	29	147	6,210	42	1	140	10,800	77	30	146	6,363	43
3) Medium	25	130	9,392	72	6	146	19,167	131	31	133	11,284	85
a) Male	19	119	10,134	85	6	146	19,167	131	25	126	12,302	98
b) Female	6	164	7,045	43	0	0	0	0	6	164	7,045	43
4) Large	9	169	11,659	69	0	0	0	0	9	169	11,659	69
a) Male	7	152	12,237	80	0	0	0	0	7	152	12,237	80
b) Female	2	228	9,638	42	0	0	0	0	2	228	9,638	42
5) Total	144	158	9,542	61	36	191	23,321	122	180	164	12,298	75
a) Male	72	156	12,347	79	34	195	24,331	124	106	169	16,191	96
b) Female	72	159	6,736	42	2	124	6,143	50	74	158	6,720	42

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs).

3.1.4. Kalman

Compared to Shirapur, labor opportunities were lower in Kalman (Table 4), with an average of 119 days of work per year available per participant and annual earnings of ₹7,164. Labor households found the highest number of workdays per person (173 days per person), whereas the average daily earnings were the highest for large households than for other classes of households. This could be due to the fact that the number of participants from large-size farm groups was very low (six members), and that most of the large farmers leased out their lands to labor households. No member from medium- and large-size households participated in non-farmwork, irrespective of gender. Labor households found substantially higher days of non-farmwork (196 days per person) than the small households (95 days per person). On an average, in the village as a whole, the daily

earnings were ₹54 for farmwork and ₹97 for non-farmwork, with workdays of 118 days for farmwork as against 125 days for non-farmwork.

Table 4. Labor market participation in farm and non-farmwork in Kalman (2007–08).

Class/ Gender	Farmwork (FW)			Non-Farmwork (NFW)				Overall (FW+NFW)				
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	20	168	7,218	43	5	196	21,210	108	25	173	10,016	58
a) Male	2	78.5	6,380	81	5	196	21,210	108	7	162	16,973	105
b) Female	18	178	7,311	41	0	0	0	0	18	178	7,311	41
2) Small	65	115	6,864	60	12	95	8,294	87	77	112	7,087	63
a) Male	36	99	7,925	80	11	103	9,012	88	47	100	8,180	82
b) Female	29	135	5,546	41	1	10	400	40	30	131	5,375	41
3) Medium	13	103	4,730	46	0	0	0	0	13	103	4,730	46
a) Male	7	38	3,017	80	0	0	0	0	7	38	3,017	80
b) Female	6	179	6,727	38	0	0	0	0	6	179	6,727	38
4) Large	6	21	1,545	73	0	0	0	0	6	21	1,545	73
a) Male	5	22	1,702	79	0	0	0	0	5	22	1,702	79
b) Female	1	19	760	40	0	0	0	0	1	19	760	40
5) Total	104	118	6,358	54	17	125	12,093	97	121	119	7,164	60
a) Male	50	82	6,554	80	16	132	12,824	97	66	94	8,074	86
b) Female	54	152	6,177	41	1	10	400	40	55	149	6,072	41

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs).

Within the Solapur region, the Shirapur and Kalman villages are located apart at a distance of 20 km. However, Shirapur found more days of farmwork as well as higher daily wages than Kalman. This was because of the rise of better irrigation facilities in the village and the existence of the sugar factory in Shirapur, which provided best employment opportunities in the off-season. So, all the labor participants of Shirapur found the best employment opportunities in both farmwork as well as non-farmwork.

In Kalman, quite interestingly, women found more workdays (149 days) than men (94 days) in the labor market (Table 4). In all the farm-size groups, women found more farm workdays than men, except in large-size farm groups where men found slightly higher days than women. Interestingly, no woman from any of the farm-size groups participated in non-farmwork, except in small-size farm groups wherein hardly one woman participated in non-farmwork. All this seems to be on account of the culture and customs of the family mechanism: women going out and working under the supervision/monitoring of other men was not socially and culturally acceptable. Labor households received higher wages for non-farmwork than for farmwork, whereas small households

received little higher daily wages in non-farmwork than farmwork. Both men and women from medium- and large-size farm groups did not take part in non-farmwork as they could find enough employment on farms. Overall, a male laborer worked for 94 days and earned ₹8,074 per year. In contrast, a female laborer was employed for 149 days and earned ₹6,072 per year, resulting in a relatively much lower wage rate for women (₹41) than men (₹86).

3.1.5. Kanzara

Labor opportunities were relatively lower in Kanzara (Table 5), with an average of 114 workdays per year available per participant, for an annual earning of ₹5,667. Earnings per day were relatively lower for both farmwork (₹46) and non-farmwork (₹67). The number of workdays were almost equal for both farmwork as well as non-farmwork (114 and 112 days per person, respectively). Labor households found quite a large number of farmwork days as well as higher annual earnings than the other groups. On the contrary, large households found the least days of farmwork as compared to other groups, but daily wages were the highest among all household groups. Since the number of participants from large household groups was very low (five in number), the average daily earning seems to be probably very high. Interestingly, large-size farm households found significantly more workdays in the non-farmwork area, but the daily wages were lowest amongst all household groups. The difference between the annual earnings from farm and non-farmwork was quite substantial; the annual earnings from the non-farm sector were 43% higher than that of the farm sector.

Table 5. Labor market participation in farm and non-farmwork in Kanzara (2007–08).

Class/ Gender	Farmwork (FW)			Non-Farmwork (NFW)				Overall (FW+NFW)				
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	34	141	6,680	47	9	96	6,678	70	43	132	6,680	51
a) Male	19	143	7,952	56	9	96	6,678	70	28	128	7,542	59
b) Female	15	139	5,070	36	0	0	0	0	15	139	5,070	36
2) Small	35	97	4,409	45	9	108	6,618	61	44	99	4,861	49
a) Male	16	100	5,421	54	9	108	6,618	61	25	103	5,852	57
b) Female	19	95	3,557	37	0	0	0	0	19	95	3,557	37
3) Medium	37	109	4,780	44	6	124	9,261	75	43	111	5,405	49
a) Male	21	90	4,837	54	4	141	11,763	83	25	98	5,945	60
b) Female	16	135	4,705	35	2	90	4,257	48	18	130	4,655	36
4) Large	5	84	4,680	56	2	168	9,700	58	7	108	6,114	57
a) Male	5	84	4,680	56	2	168	9,700	58	7	108	6,114	57
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
5) Total	111	114	5,241	46	26	112	7,486	67	137	114	5,667	50
a) Male	61	108	5,948	55	24	114	7,755	68	85	110	6,458	59
b) Female	50	121	4,378	36	2	90	4,257	48	52	120	4,374	37

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

In Kanzara also, lesser women participated in the labor market than men. Female laborers found more farm workdays (121 days per person) than men (108 per person), but women laborer's wages were lower than that of the male laborers (₹36 versus ₹55). No woman from the large households did any farmwork. In the case of non-farmwork, hardly any woman participated, except in medium-size farm groups wherein only two female laborers participated in non-farmwork (90 days per person), and their wages were nearly 63% less than their male counterparts. Male laborers found slightly more days of employment opportunities in non-farmwork than in farmwork, and non-farm wages were slightly higher than that of farm wages. On an average, male laborers found 110 days of workdays per year and earned ₹6,458, while female laborers found 120 days of work per year and earned ₹4,374, which was only 68% of the male earnings.

3.1.6. Kinkheda

In Kinkheda, women participated almost equally in the labor market as men, especially in labor and small-size households (Table 6). In small-size households, female laborers participated more than males in terms of the number of participants. Male laborers found more farm workdays than female in labor and small-size groups, while in medium- and large-size households it was the other way around. In the case of non-farmwork, there was absolutely no participation from females, irrespective of the farm-size categories, as in other Maharashtra villages. On an average, a male worker found 148 days of work and earned ₹8,167 per year, while a woman found 140 days of work and earned ₹4,385. Thus, while women worked for almost the same number of farmwork days as men, their earnings were only 54% of the men's earnings.

Table 6. Labor market participation in farm and non-farmwork in Kinkheda (2007–08).

Class/ Gender	Farmwork (FW)				Non-Farmwork (NFW)				Overall (FW+NFW)			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	22	132	5,930	45	1	15	1,050	70	23	126	5,718	45
a) Male	11	150	8,117	54	1	15	1,050	70	12	138	7,528	54
b) Female	11	113	3,744	33	0	0	0	0	11	113	3,744	33
2) Small	40	172	7,142	41	1	45	3,150	70	41	169	7,045	42
a) Male	19	192	9,682	50	1	45	3,150	70	20	185	9,355	51
b) Female	21	155	4,845	31	0	0	0	0	21	155	4,845	31
3) Medium	14	117	4,621	39	5	155	14,550	94	19	127	7,234	57
a) Male	8	86	4,462	52	5	155	14,550	94	13	112	8,342	74
b) Female	6	159	4,832	30	0	0	0	0	6	159	4,832	30
4) Large	17	125	5,381	43	1	180	5,400	30	18	128	5,382	42
a) Male	10	130	6,605	51	1	180	5,400	30	11	135	6,495	48
b) Female	7	118	3,632	31	0	0	0	0	7	118	3,632	31
5) Total	93	146	6,154	42	8	127	10,294	81	101	144	6,482	45
a) Male	48	152	7,812	52	8	127	10,294	81	56	148	8,167	55
b) Female	45	140	4,385	31	0	0	0	0	45	140	4,385	31

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

Thus, in general, the participation of women laborers was relatively lower as compared to men. The villages of Andhra Pradesh recorded greater women participation than the villages in Maharashtra. Particularly in Shirapur, Kalman and Kanzara, women hardly participated in both farm and non-farmwork. Contrastingly, in Kinkheda, both men and women participated equally in the labor market. This was because of the poor economic condition of these families. But the Shirapur, Kalman and Kanzara villages were dominated by a rich and high-caste population, such as the Marathas, Deshmukhs and Maratha Patils, and hence, due to family customs and status, women hardly participated in the labor market.

In contrast to our results, Ryan (1980) found in his study that the participation rates for males were significantly lower in the two Mahbubnagar villages and generally higher in the two Akola villages. Boserup (1970) observed that in the Dokur, Shirapur, Kanzara and Kinkheda villages the use of total female labor on crops exceeded that of total male labor. In Aurepalle and Kalman, there was higher percentage of female labor used. This high proportion of female labor use on agricultural land far exceeded the 20% figure cited for Asia (Boserup, 1970).

Similarly, Binswanger and Shetty (1977) showed that new technologies, such as the use of herbicides in the SAT, could have adverse consequences on the demand for female labor required for hand-weeding. Almost all hand-weeding is done by hired female labor, the most disadvantaged of all the labor categories in SAT India. They suggested that any changes that affect female labor will largely affect hired female labor, particularly in irrigated and/or cash-crop situations.

3.2. Labor Market Participation in Migration, Caste and Other Occupations

Different kinds of occupation in Indian villages reflect the base of their socioeconomic culture. Since the ancient times, Indian villages have been involved in various occupations, out of which farming is the principal one. Apart from farming, villagers did also adopt occupations and become fishermen, goldsmiths, potters, priests, carpenters, blacksmiths, barbers, weavers, cobblers, sweepers, water-bearers, toddy-tappers and so on.

This study groups various income-generating activities other than farm and non-farmwork into caste occupations, other self-occupations and temporary out-migration for work, and then analyzes the labor participation. The caste occupations can be defined as a work force which was divided into various castes as per their activity and skills. The skill and expertise was passed on from generation to generation whereby the profession was followed by the members and became the family occupation. Each person taught his descendant the intricacies and task proficiency leading to talent and specialization confined within the clan, which included, among others, toddy-tappers and sellers, carpenters, goldsmiths, masons, washermen, barbers, butchers, potters, basket makers, weavers, cobblers, and persons engaged in sheep-rearing and other religious services.

Other self-occupation refers to the status of an individual who, rather than accepting a position as an employee of another person or organization, chooses to go into business for himself or herself, such as tailoring, shopkeeping, being a mechanic, selling fruits and vegetables, running one's own auto, being a financier, leaf-plate making, mat-weaving and selling, etc.

Temporary out-migration may be seasonal – as a migrant worker moves in search of work, or periodic – as a worker, usually male, moves to an industrial, urbanized area and sends money back to the dependents in the village. Out-migration has been increasing in all VLS villages, particularly in

Andhra Pradesh, since the 1990s, because of an increase in population pressure and non-availability of work within the village. The main reasons for migration reported by the migrants are: (a) not getting employment throughout the year within the village; (b) negligible alternative employment opportunities; (c) high population pressure; (d) low wage rate for farm and non-farm activities; (e) lack of demand for certain caste occupations, such as for goldsmiths, potters, etc; and (f) loss of agricultural income owing to uneven distribution of rainfall and frequent droughts.

The labor participation in caste occupations, other self-occupations and out-migration in the six traditional VLS villages was studied and the results are presented in Tables 7-12.

3.2.1. Aurepalle

The income-generating activities other than farm and non-farmwork, namely, caste occupation, other self-occupation and temporary migration in Aurepalle are furnished in Table 7. In Aurepalle, toddy-tapping and selling is the main caste occupation for a majority of the households, followed by sheep-rearing. It was crystal clear from the castes' occupation groups that, quite impressively, more members participated from large-size group (45) than medium- (31), labor (13) and small-size (7) groups, as well as finding more caste employment days (242 days per person per year) than other farm-size groups. Nearly 67% of the large farmers (Gowda families) were engaged in toddy-tapping and selling, which is a prominent business and the main source of non-farm income. Generally, men tap the trees and women sell the toddy in the village. A majority of the households got an average of ₹350–500 per day as net income in the peak season of March to May/June. Each household gets an average of ₹100–150 per day as net income through the year. The people from this caste have acquired more land by purchase using the income generated from toddy sale rather than that from other caste occupations. However, the total annual earnings and daily wages seemed to be lower in small-size groups, which might probably be because of the fact that the number of participants from the small groups was hardly seven, and hence the average turned out to be more. Nearly 74% of the total participants were engaged in toddy-tapping and selling and only a few took up sheep-rearing (4) and clothes-washing. (3).

On an average, for the village as a whole, there were a total of 96 participants in caste occupation employed for 231 days, earning an average income of ₹14,835 per person per year. If we spotlight on gender participation, an almost equal number of members participated from both male (50) and female (46) groups. Interestingly, both male and female participants from labor and small-size groups were considerably lower in number than medium- and large-size groups. This was because most of the men and women from both large- and medium-size households belonging to the Gowda caste were engaged in toddy-tapping and selling, whereas, in labor and small-size households the main caste occupations included barbers, carpenters and persons engaged in sheep-rearing. Perhaps the demand for this kind of work was very low and hence the income was relatively lower than toddy-tapping and selling. Hence we could see lesser participation of both males and females from these groups.

The participation in other self-occupations was relatively much less in terms of the number of members (Table 7) when compared to caste occupations and migration. Amongst different farmer categories, small-size- and labor households were employed for quite a large number of days than medium- and large-size households. This was because the members of labor and small-size households were absorbed in running their own autos, stitching clothes, shopkeeping, etc. Not even

three members from small-size households participated – their average annual earnings as well as daily earnings were quite lower than the other classes of households because the members from this group hardly found regular jobs (like that of a watchman), and earnings from these jobs were very less and hence their daily wages were considerably less (₹44 per person) as compared to other households. On the contrary, large-size households received relatively much higher daily earnings (₹333 per day per person) than other farm groups. There are two reasons for such high daily-wage earnings. First, only men and no women participated from this group, male wages being much higher than the female wages. Second, most of the large farmers were engaged in the moneylending business wherein they earned huge returns on their investment. It is mostly the returns to capital investment than to their labor.

Table 7. Other occupations and sources of income in Aurepalle (2007–08).

Class/ Gender	Caste occupation				Other-self occupation				Migration			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	13	221	17,977	81	25	233	35,012	150	21	172	12,932	75
a) Male	8	286	25,125	88	15	247	50,280	204	18	184	14,171	77
b) Female	5	118	6,540	55	10	213	12,110	57	3	103	5,500	53
2) Small	7	233	19,357	83	3	273	12,062	44	10	184	8,110	44
a) Male	4	245	27,500	112	1	340	9,000	26	7	180	9,314	52
b) Female	3	217	8,500	39	2	240	13,593	57	3	193	5,300	27
3) Medium	31	220	12,421	56	10	199	25,480	128	17	223	15,453	69
a) Male	15	230	15,413	67	6	225	36,100	160	15	241	16,953	70
b) Female	16	211	9,616	46	4	160	9,550	60	2	90	4,200	47
4) Large	45	242	14,888	62	7	134	44,571	333	8	242	21,149	87
a) Male	23	260	19,224	74	7	134	44,571	333	8	242	21,149	87
b) Female	22	223	10,355	46	0	0	0	0	0	0	0	0
5) Total	96	231	14,835	64	45	213	32,851	154	56	200	14,010	70
a) Male	50	254	19,687	77	29	218	44,545	220	48	211	15,495	73
b) Female	46	207	9,562	47	16	203	11,655	58	8	134	5,100	42

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

On an average, for the village as a whole, 45 members participated in other self-occupations. However, female participation (16) was lower than male (29). If we review the other rural areas, the women too are actively getting involved in different industries like matchbox and firework industries, bidi-making, agate and slate industries, brick industry, construction industry, spice industries, etc. Among these, bidi-making and the slate- or brick-making industries are the most well-spread industries in India. In fact, the number of female participants in such occupations would

be more than male, but our result symbolizes quite an antithetical one. In Aurepalle, other self-occupations specifically for women were stitching clothes, maintaining regular jobs (like that of a maidservant, etc). However, it can be argued that due to the low demand for these kinds of work on a day-to-day basis, the participation of women is declining. Male members found slightly higher days of employment than females, but scored significantly higher over the latter in terms of total earnings.

Quite delightfully, large households found relatively higher migration employment days (242 days per person) as well as higher annual earnings (₹21,149 per year per person) and daily wages than other households. This was because they were finding more employment opportunities such as positions of sales representatives, company workers, private jobs, lorry drivers, hospital clerks, etc, in the neighboring cities, rather than searching for other non-farm employment within the village, because of which they migrated to Hyderabad, Sadanagar, etc. Labor households found relatively less employment days (172 days per person per day). The average daily earnings were relatively lower for small households than other farm-size groups. On an average, the households in the village in general found 200 days of temporary-migration employment days, with total earnings of ₹14,010. Relatively very few women migrated outside the village. It is usually the case that the head of the household moves to the neighboring villages to earn, and the women take care of the family by doing some domestic work. In general, migration and contract labor is the only option left for the farmers in the face of starvation. Hence, there was nothing left for them to do in the village and they were just not able to make ends meet and support themselves.

Some of the reviews ensure that migration became a universal phenomenon. For instance, a study conducted by Deshingkar and Start (2003) concluded that the seasonal and circular migration of labor for employment has become one of the most durable components of the livelihood strategies of people living in rural areas. Migration is not resorted to just by the very poor during times of crises for survival and coping, but has increasingly become an almost inevitable option for the poor and non-poor alike. Similar results emerged from the study of Rao (1994) on Palamur labor in Andhra Pradesh, De Haan's (2002) historical study of migration in western Bihar, or Srivastava and Ali's (1981) study of laborers from Bundelkhand. It is now recognized that migration is a part of the normal livelihood strategy of the poor (McDowell and De Haan, 1977), and does not occur only during times of emergency or distress.

In general, if we focus on the daily wages in different non-farm activities the participants found better wages in other self-occupations (₹154) rather than caste occupations (₹64) and migration (₹70).

3.2.2. Dokur

Compared to Aurepalle, in Dokur, we could find very less employment in caste occupation (hardly 183 days per person) (Table 8). In Dokur, toddy-tapping and selling is not a prominent caste occupation, and hence, hardly three households from labor groups were performing this job. The employment days for caste occupations like priests, goldsmiths, barbers, basket-making, washermen, carpenters, cobblers and other such kinds of jobs were less because of the low demand for their products/services. The number of member participants from each of the farm-size groups was almost the same and hardly a few women participated from each group. Medium households were finding more employment days (211 days per person) as well as more annual earnings,

followed by labor, small- and large-size households. Daily wages across all the farm-size groups were almost the same; no significant difference was found except in case of labor households whose average annual earnings and daily wages were considerably low (₹5,960 and ₹37, respectively). Hardly one or two families were involved in washing clothes as caste occupation, and the income from this occupation was relatively lower than other caste occupations. On an average, for the village as a whole, a total of 30 members participated in the caste occupation group, with 183 employment days and annual earnings of ₹16,889. While in the case of females, hardly a few members participated (8), but in Aurepalle, we could find great numbers of female, participation (46 members), registering 26% of the annual earnings of males. This was because, as discussed earlier, in Aurepalle, toddy-tapping and selling was the main business, and hence both men and women were finding better employment in Aurepalle than in Dokur.

Table 8. Other occupations and sources of income in Dokur (2007–08).

Class/ Gender	Caste occupation			Other-self occupation				Migration				
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	6	159	5,960	37	17	215	17,626	82	27	225	27,471	122
a) Male	3	129	5,497	43	11	178	19,222	108	18	237	37,592	158
b) Female	3	189	6,423	34	6	284	14,700	52	9	200	7,229	36
2) Small	10	190	19,327	102	13	223	14,388	65	17	197	10,237	52
a) Male	8	204	21,146	104	9	238	17,550	74	11	203	10,940	54
b) Female	2	135	12,050	89	4	188	7,275	39	6	187	8,948	48
3) Medium	7	211	22,271	106	10	170	12,154	72	30	199	8,258	42
a) Male	5	192	28,520	149	8	162	12,467	77	22	210	9,263	44
b) Female	2	258	6,650	26	2	200	10,900	55	8	168	5,496	33
4) Large	7	169	17,500	103	20	198	34,710	176	15	222	13,713	62
a) Male	6	189	20,167	107	15	218	43,331	199	11	252	15,139	60
b) Female	1	50	1,500	30	5	137	8,846	65	4	140	9,790	70
5) Total	30	183	16,889	92	60	203	21,707	107	89	210	15,384	73
a) Male	22	186	20,386	106	43	201	26,026	127	62	224	18,828	82
b) Female	8	175	7,271	45	17	208	10,784	53	27	178	7,477	43

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

In other-self occupation groups, we could find more member participation in Dokur (60 members) than Aurepalle (45 members). Small households found more employment days of 223 days per person, with annual earnings of ₹14,388, but daily average earnings were relatively less compared to other households. Quite interestingly, we could see more member participation in other self-occupations, and they found more annual earnings (₹34,710) as well as daily wages (₹176), with

198 workdays. This could be because, in most of the large households, members found better employment opportunities like mechanical work, poultry business, regular job, contractorship and shopkeeping, etc, through which they earned a good income. On an average, for the village as a whole, they could find 203 workdays, with annual earnings of ₹21,707 and daily wages of ₹107 per person. Though female participation was low (17 members), they found more workdays than men. In spite of working more days, they could receive hardly 42% of the daily earnings of males.

In migration groups it is evident from the results that more members migrated from Dokur village (89 members) than Aurepalle (56). Due to the dearth of sufficient employment opportunities within the village they skip towards neighboring village/city in search of employment. Labor households found considerably greater employment days (225 days per person) with higher annual earnings (₹27,471) as well as daily wages (₹122) than other households. On an average, we could find a total of 210 migrated employment days, with annual earnings of ₹15,384 and daily wages of ₹73. Overall, a male laborer found 224 days of work and earned ₹18,828 per year, while a female labor participant worked for 178 days and earned only ₹7,477 per year. Thus, daily earnings were ₹82 for male labor and ₹43 for female labor. While a part of this difference can be attributed to differences in working hours, the type of work and labor productivity, it can also be ascribed to the tradition of paying less to women.

Although the panel data on seasonal migration in India is lacking, a growing number of micro-studies have established that seasonal migration for employment is growing not only in terms of absolute numbers but also in relation to the size of the working population as a whole (Breman, 1985; Breman, 1996; Rao, 1994; Rogaly et al, 2001). The National Commission on Rural Labor (NCRL) puts the number of circular migrants in rural areas alone at around 10 million (including roughly 4.5 million inter-state migrants and 6 million intra-state migrants). But the departments of rural development, agriculture and labor are not geared to dealing with migrants and just regard them as external to the systems that they work with. According to the NCRL, the majority of seasonal migrants are employed in cultivation and plantations, brick kilns, quarries, construction sites and fish processing. Further, large numbers of seasonal migrants work in urban informal manufacturing, construction, services or transport sectors, employed as casual laborers, head-loaders, rickshaw-pullers and hawkers (Dev, 2002).

3.2.3. Shirapur

In general, caste occupations provided higher incomes to households in the Mahbubnagar villages than in Maharashtra (Table 9). In Shirapur, we could find hardly 3 members participating in caste occupations, and these three participants belonged to labor group. On other hand, none of the members participated from the remaining households. Finally, only the labor group could find 93 days of caste occupation, with average annual earnings of ₹21,125 and daily wages of ₹227. Most of the households with caste occupation were engaged in other occupations like services, farming, farm labor, etc, because they earned more income in other occupations than in caste occupations; and further, the demand for the work of caste occupation was less; for instance, potters, blacksmiths, carpenters and stonemasons, etc. Since most of these works were mechanized and the demand was for ready-made ones, the earning through caste occupations was diminishing over time.

Table 9. Other occupations and sources of income in Shirapur (2007–08).

Class/ Gender	Caste occupation				Other-self occupation				Migration			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	3	93	21,125	227	13	272	36,362	134	2	100	15,450	155
a) Male	3	93	21,125	227	10	297	45,360	153	2	100	15,450	155
b) Female	0	0	0	0	3	189	6,367	34	0	0	0	0
2) Small	0	0	0	0	66	254	50,393	199	2	85	50,000	588
a) Male	0	0	0	0	56	258	52,444	203	2	85	50,000	588
b) Female	0	0	0	0	10	230	38,910	169	0	0	0	0
3) Medium	0	0	0	0	24	236	37,748	160	0	0	0	0
a) Male	0	0	0	0	23	234	38,215	163	0	0	0	0
b) Female	0	0	0	0	1	288	27,000	94	0	0	0	0
4) Large	0	0	0	0	6	173	32,500	188	1	150	15,000	100
a) Male	0	0	0	0	6	173	32,500	188	1	150	15,000	100
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
5) Total	3	93	21,125	227	109	248	44,951	182	5	104	29,180	281
a) Male	3	93	21,125	227	95	251	46,994	187	5	104	29,180	281
b) Female	0	0	0	0	14	225	31,086	135	0	0	0	0

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

In other self-occupations they found better opportunity than the Mahbubnagar villages. Quite a great number of members participated from small-size households, with employment days of 254 days per person and highest annual earnings of ₹50,393 as well as highest average daily earnings of ₹199 per person per day. Labor households found greater number of employment days than other households, but the total number of participants from their group was hardly 13 members. From the point of view of gender, very few women participated from all classes of households and no women participated from large-size households. On an average the participant could find 248 days of employment, with average total annual earnings of ₹44,951 per year and average daily wages of ₹182 per day. Male laborers found 251 days of employment with daily wages of ₹187, while female laborers found 225 days of employment with daily wages of ₹135 per day.

In the migration group it is apparent from the results that, in Shirapur village, very few people migrated to other villages in search of work compared to villages from the Mahbubnagar district. This was due to the fact that this village was endowed with canal-water facilities for irrigation of sugarcane, which resulted in a drastic increase in sugarcane production, thanks to the sugarcane factory existing at a distance of 34 km from Shirapur village. Hence, villagers finding more employment opportunities within the village than outside it resulted in lower migration to other

areas. We could find only two members migrating from the labor group, two from the small group, only one from the large group and no one at all from the medium group. On an average, a total of five members migrated and found 104 workdays per person, with total earnings of ₹29,180 and daily wages of ₹281.

3.2.4. Kalman

In Kalman, we could find a few more participants (nine) involved in caste occupations than Shirapur (Table 10). In all the farm groups, one to six men participated, whereas no woman participated in caste occupations. Quite interestingly, neither men nor women participated from large farm-size groups. On an average, the Kalman village as a whole could find 126 days of employment, with average annual earnings of ₹18,778 and daily wages of ₹149. There were many opportunities in farmwork, rather than caste occupations, owing to the cultivation of grapes and vegetables in the village and their sale in the nearby towns. Moreover, the demand for products or services of caste occupations has been declining due to the availability of modern tools and equipment.

In other types of self-occupation it is plain from the results that considerably very few members participated in Kalman village than Shirapur. More members participated from small households (34 members), but they found less employment (223 days) as well as annual earnings. A labor household with 23 participants found 273 days of employment. Thus the number of participants from both medium- (seven members) and large-size (five members) households was relatively less than the other households. As a result the average number of employment days as well as daily earnings turns out to be probably more. No women participated from any of the farm-size groups except in small-size households, where hardly a few women (seven) participated. Villagers from this village found 252 days of employment, with annual earnings of ₹61,991 and daily wages of ₹246. Male laborers found 255 days of employment with daily wages of ₹253, while female laborers found 224 days of employment with daily wages of ₹98 per day.

In migration, quite fascinatingly, only one member migrated from the labor group in search of work, for 131 days, and he earned about ₹20,492 per year with a daily earning of ₹156 per day. However, neither men nor women participated from the other classes of households. Due to the fact that most of the villagers go to nearby villages and cities for purposes of work and are back by the evening because of good infrastructure and travel facilities, we could find very few migrants from this village.

Table 10. Other occupations and sources of income in Kalman (2007–08).

Class/ Gender	Caste occupation				Other-self occupation				Migration			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	6	65	10,667	164	23	273	53,817	197	1	131	20,492	156
a) Male	6	65	10,667	164	23	273	53,817	197	1	131	20,492	156
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
2) Small	2	200	30,500	153	34	223	40,929	183	0	0	0	0
a) Male	2	200	30,500	153	27	223	45,823	206	0	0	0	0
b) Female	0	0	0	0	7	224	22,050	98	0	0	0	0
3) Medium	1	347	44,000	127	7	245	115,714	472	0	0	0	0
a) Male	1	347	44,000	127	7	245	115,714	472	0	0	0	0
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
4) Large	0	0	0	0	5	364	167,600	460	0	0	0	0
a) Male	0	0	0	0	5	364	167,600	460	0	0	0	0
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
5) Total	9	126	18,778	149	69	252	61,991	246	1	131	20,492	156
a) Male	9	126	18,778	157	62	255	66,500	253	1	131	20,492	156
b) Female	0	0	0	0	7	224	22,050	98	0	0	0	0

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

3.2.5. Kanzara

It was found from Table 11 that very few participants (nine) from small- and medium-size farm groups were involved in caste occupation, because hardly could we find caste occupations like that of barber, washerman or potter, and no other prominent income-sourcing caste occupations like that of a blacksmith, toddy-tapper, etc, were found. Small-size households found more employment days (124 days per person) than medium-size households (60 days per person). Quite curiously, females could find more employment (135 days per person) than males (108 days per person). However, their average annual earnings and daily wages were much lower than that of the male participants. On an average, the village for the whole could find 117 days of work per person per year, with annual earnings of ₹5,545 per year and daily wages of ₹47 per day. Male participants recorded annual earnings of ₹6,333 with daily wages of ₹59, while on the other hand female participants found an annual earning of ₹3,970 and daily wages of ₹29. In Kanzara, we could find relatively fewer number of participants (27 members totally) in other self-occupations than the Kalman village (69 members totally). A very few number of people participated from each of the farm groups such as labor (6) small- (10), medium- (4) and large-size groups (7). Labor households found more workdays (261 days per person per year), but fewer earnings than small- and medium-

size households (₹19,083 per year). On other hand, medium-size households earned a slightly higher amount (₹24,500 per year) in terms of annual earnings, with 218 days of employment. On an average, the village, on the whole, found 216 days of employment, with annual earnings of ₹21,083 per year and daily wages of ₹98. Like other Maharashtra villages, very few women participated in other modes of self-occupation.

Table 11. Other occupations and sources of income in Kanzara (2007–08).

Class/ Gender	Caste occupation				Other-self occupation				Migration			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	0	0	0	0	6	261	19,083	73	2	105	2,400	23
a) Male	0	0	0	0	4	252	24,250	96	2	105	2,400	23
b) Female	0	0	0	0	2	280	8,750	31	0	0	0	0
2) Small	8	124	5,789	47	10	170	23,609	139	2	145	8,500	59
a) Male	5	117	6,880	59	9	149	25,072	169	2	145	8,500	59
b) Female	3	135	3,970	29	1	360	10,440	29	0	0	0	0
3) Medium	1	60	3,600	60	4	218	24,500	112	1	60	16,980	283
a) Male	1	60	3,600	60	4	218	24,500	112	1	60	16,980	283
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
4) Large	0	0	0	0	7	241	17,236	72	1	130	7,500	58
a) Male	0	0	0	0	6	231	17,767	77	1	130	7,500	58
b) Female	0	0	0	0	1	300	14,050	47	0	0	0	0
5) Total	9	117	5,545	47	27	216	21,083	98	6	115	7,713	67
a) Male	6	108	6,333	59	23	200	22,924	122	6	115	7,713	84
b) Female	3	135	3,970	29	4	305	10,498	35	0	0	0	0

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

Just like in the other villages we could find very few migrants from Kanzara, because farming is the main livelihood for the villagers and a lot of weightage is given to farmwork. Due to the high adaptation of new technologies we could see the migration of the few laborers from the village in search of farmwork to nearby villages and cities. Only six members participated in migration-related work – hardly one or two members from all the farm groups. No women participated from any of these farm groups. On an average Kanzara could find 115 days of work for a migrating worker, with annual earnings of ₹7,713 per year per person and daily wages of ₹67 per day.

3.2.6. Kinkheda

It was observed from Table 12 that, like the other villages, Kinkheda is also not an exception – we found members participating in caste occupations. Hardly four members participated from the

small-size groups, and there was no member participation observed from any of the other classes. On an average, for the village as a whole, we could find 244 days of work per year with daily wages of ₹61.

Table 12. Other occupations and sources of income in Kinkheda (2007–08).

Class/ Gender	Caste occupation				Other-self occupation				Migration			
	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)	NW	WDPW (No./a)	EPW (Rs/a)	DE (Rs)
1) Labor	0	0	0	0	9	235	22,289	95	4	161	5,723	35
a) Male	0	0	0	0	6	249	29,859	120	3	175	6,857	39
b) Female	0	0	0	0	3	208	7,150	34	1	120	2,320	19
2) Small	4	244	14,888	61	7	236	8,835	37	3	103	1,333	13
a) Male	4	244	14,888	61	3	257	7,015	27	3	103	1,333	13
b) Female	0	0	0	0	4	220	10,200	46	0	0	0	0
3) Medium	0	0	0	0	7	197	42,250	214	0	0	0	0
a) Male	0	0	0	0	7	197	42,250	214	0	0	0	0
b) Female	0	0	0	0	0	0	0	0	0	0	0	0
4) Large	0	0	0	0	10	270	27,388	101	4	125	4,950	40
a) Male	0	0	0	0	9	260	25,098	97	4	125	4,950	40
b) Female	0	0	0	0	1	360	48,000	133	0	0	0	0
5) Total	4	244	14,888	61	33	238	25,214	106	11	133	4,245	32
a) Male	4	244	14,888	61	25	239	28,873	127	10	134	4,437	31
b) Female	0	0	0	0	8	233	13,781	30	1	120	2,320	19

Note: NW=No. of Workers; WDPW=Work Days Per Worker (No./annum); EPW=Earnings Per Worker (Rs/annum); DE=Daily Earnings (Rs)

Like the other villages in Kinkheda we could find very few member participants (33 persons) in other modes of self-occupation. Large households found more employments days (270 days per person) than other classes of households, but lesser average annual earnings (₹27,388 per year) followed by small- (236) labor (235) and medium-size (197 days per person) households. The high annual earnings with 197 days of work recorded by medium-size households in comparison to other classes of households was because of the former's trading in cotton and livestock animals, and the commission earned from these trading businesses. In general, as a village, on the whole, they could find 238 days of employment, with average annual earnings (₹25,214 per year) and daily wages of (₹106 per day). Male labor worked for 239 days with daily earnings of ₹127, whereas female labor worked for 233 days of work with daily wages of ₹30.

In the migration group we could find slightly more member-participants in Kinkheda (11 members) than other Maharashtra villages. Hardly three or four members migrated from labor, small- and large-size households; but none of the members from medium-size households, and hardly one woman, migrated from the labor group. In general, land tenancy is more in Kinkheda though it is nearer to water sources. This is because of the lack of finance. Large-size farmers leased out their land to the neighboring villages and they engaged in other forms of occupation and migration. In general, on an average, we could find 133 days of employment, with average annual earnings of ₹4,245 and daily wages of ₹32.

4. Conclusion

Women's participation in the rural labor market was relatively very little, irrespective of the farm-size groups. This was more so the case in the Maharashtra villages, wherein women from medium and large farm-size groups, particularly from high castes like the Maratha Deshmukhs, did not participate in the labor market, because of social and cultural constraints, even though they were in need of work. Hence, small agro-processing units in/around the villages would help them get better employment and enhance their labor participation and, ultimately, their empowerment.

If a woman turns to home-based, income-generating activities such as weaving, basket-making, shopkeeping, etc, it would improve the economic position of her family and also improve her social status in the male-dominated society. Under such circumstances, there was a need for designing effective interventions/programs for the development of rural women.

Due to low income from agriculture and uncertainty in productivity, most of the farmers in all the farm-size groups leased out their land and migrated outside the village in order to earn their livelihood. However, migration/diversity in occupation has both positive and negative effects; on the one hand, they could survive their life, but on the other, they faced severe problems in terms of ill health, discontinuity in their children's education and fallowing of their land. Since more than 80% of the population in these VLS villages primarily depends on agriculture, the issues of utmost concern, perhaps, are agricultural deceleration, agrarian distress and inadequate rural employment growth. Hence, the government needs to firstly strengthen support to farmers so that they continue in agriculture, and secondly, promote newer technologies and employment schemes which would enhance the creation of massive employment and thus improve the financial status of the framers.

In terms of caste and other occupations, the occupation scenario in Indian villages has changed mainly due to the changing economic scenario of the villages. The invention of new technologies has encouraged the villagers to take up new occupations. Apart from that, the decline in the fertility of lands and uncertainty of output from agriculture in many villages has also forced many villagers to give up their traditional occupation of agriculture, leaving them, finally, with the option of forced migration to the nearby urban areas in search of alternative occupation.

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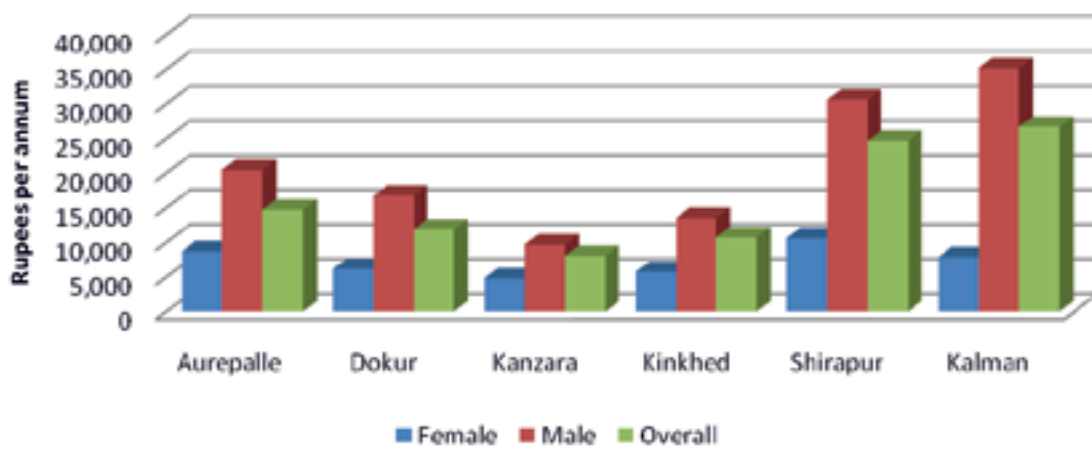
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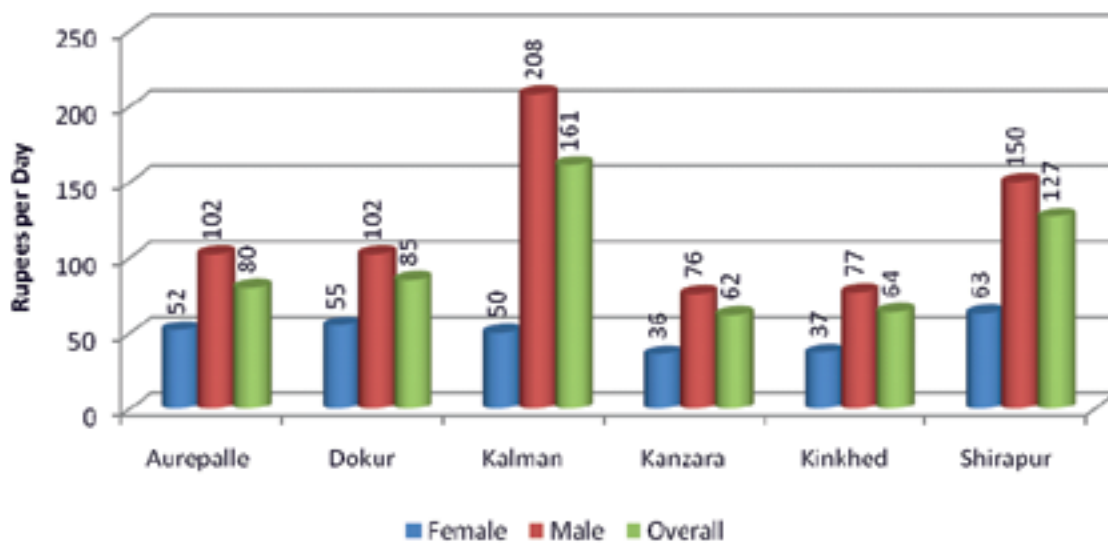
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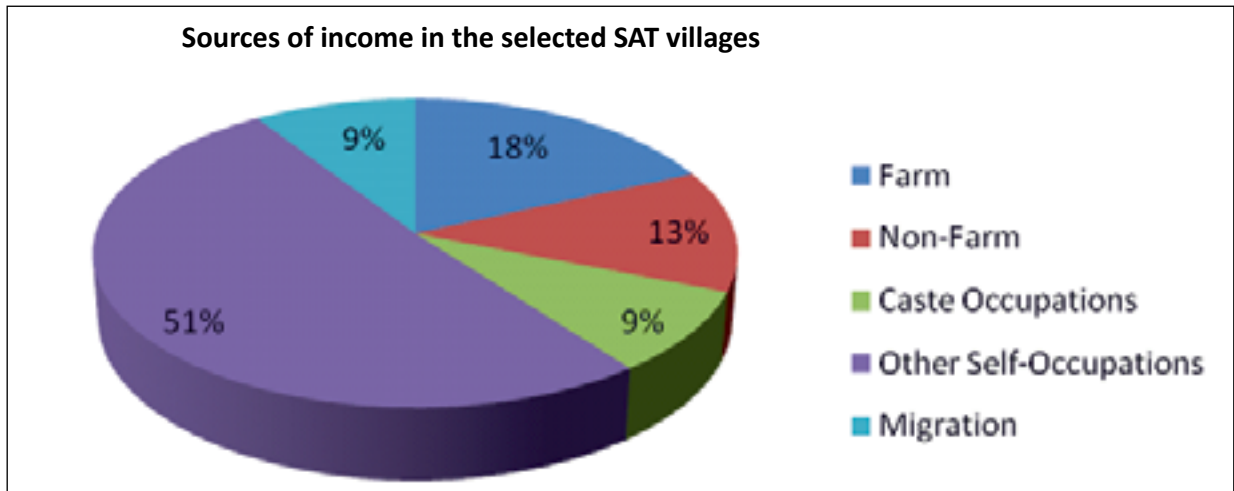
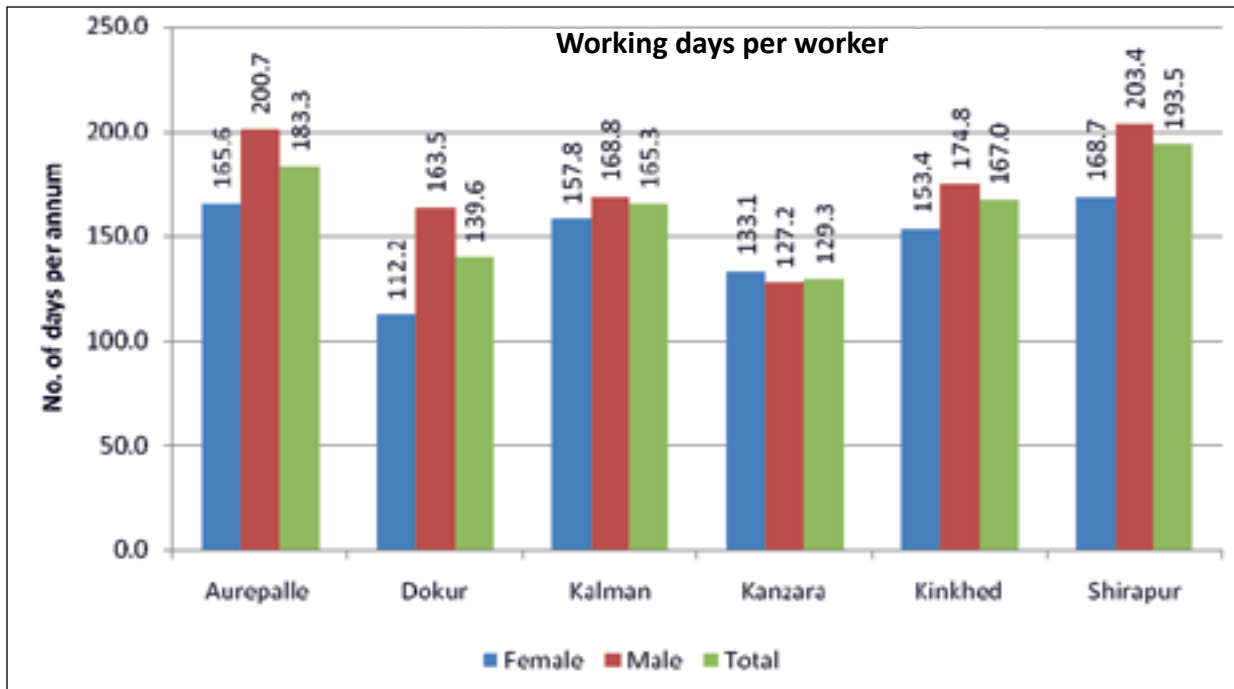
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Earnings per worker from all occupations



Average daily earnings from all occupations







International Crops Research Institute for the Semi-Arid Tropics

The **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)** is a non-profit, non-political organization that conducts agricultural research for development in Asia and sub-Saharan Africa with a wide array of partners throughout the world. Covering 6.5 million square kilometers of land in 55 countries, the semi-arid tropics have over 2 billion people, of whom 644 million are the poorest of the poor. ICRISAT innovations help the dryland poor move from poverty to prosperity by harnessing markets while managing risks – a strategy called Inclusive Market-Oriented Development (IMOD).

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