

topic of speculation (Bharadwaj 1974a; Bhaduri 1973) and have more recently become the focus of empirical investigation (Rudra 1975a, b; Barilhan and Rudra 1978).

In all villages, labor-credit links are restricted to RFS contracts. They provide poor people with an opportunity to raise credit that would often be totally lacking. In Akola they are of such short duration that they are probably to be interpreted as being of mutual benefit in most cases. Although the contracts are of longer duration in Sholapur, their terms do not appear to be substantially below those available in other submarkets. Only in Aurepalle are terms of credit-linked RFS contracts clearly inferior. But we believe that it is not primarily the tying that puts the laborers at a disadvantage, but the effective collusion of farmers in the absence of alternative sources of labor demand. Without collusion or other forms of monopsony or monopoly power, the terms of tied transactions may thus reflect "competitive" market conditions of supply and demand without an additional extraction of "rents" to the "stronger" partner. In this paper we have found little evidence that tied transactions in a submarket cannot be understood by a supply and demand framework for this type of transaction. Traditional analysis of market imperfections such as monopsony, monopoly, collusion, and restrictions to mobility can then be used to explain unequal or exploitative terms in regions or villages where the imperfections can be documented empirically.

Labor Market Behavior in Rural Villages in South India: Effects of Season, Sex, and Socioeconomic Status

James G. Ryan and R. D. Ghoshal

Most developing countries of the semiarid tropics (SAT), particularly in Asia, have a relative abundance of labor resources in proportion to capital and land. Statistics on this apparent abundance are usually only available (if at all) in terms of national or regional annual aggregates, as pointed out recently by McDermid (1977), Bardhan (1977), and Branson and Jessee (1977). Even these statistics are often not reliable, particularly for the rural areas. Problems of seasonal unemployment are most acute in rural areas, as revealed in the comprehensive study of Rudra and Biswas (1973). It is imperative to derive more accurate measures and a better understanding of the demand and supply parameters of labor markets, particularly in India, where 70 percent of the labor force is classified as agricultural workers.

This paper represents an attempt to bridge some of the gaps in our knowledge. It is an analysis of the labor market behavior of 240 labor and cultivator households in six semiarid tropical villages in the Maharashtra and Andhra Pradesh states of south India, a region that has largely been neglected in this field of research. The data for this study were drawn from six villages in the SAT of peninsular India, where intensive socioeconomic studies have been conducted continuously since May, 1975, as part of the ICRIISA economics program.¹ Details of the labor utilization of each family member and of hired personnel were obtained.² These data related to both on-farm and off-farm activities as well as to household use.³

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1. For a detailed description of the methodology of the ICRIISA program and the type of information obtained, see Iyengar chapter 3.

2. The on- and off-farm activities were the result of a series of interviews with each household. Household time allocation of each individual was obtained by a series of interviews providing each interview.

1291

The major crops grown in the Mahbubnagar villages are paddy, sorghum, groundnuts, pigeon peas, pearl millet, and castor. The Alfisol soils in these villages have a low moisture-holding capacity; this means that all nonirrigated crops are grown in the rainy season. As a result, about two-thirds of total labor use on farmers' fields occurs in the rainy season. The Sholapur villages have medium-deep and deep Vertisol soils, which have a high moisture-holding capacity; thus most nonirrigated cropping occurs in the post-rainy season on residual soil moisture. More than half of the total labor use in Sholapur is concentrated in the post-rainy season of September to March. The predominant crops here are sorghum, chick-peas, and safflower. Some pearl millet and pigeon peas are sown on the shallow Vertisols in the rainy season. Cotton is the primary crop of the Akola villages, being sown in rows on the medium-deep Vertisols in the rainy season, mixed with sorghum and pigeon peas. More than 90 percent of total crop labor use occurs in the rainy season in the Akola villages.

In Aurepalle and Kalman, total male labor used on crops was slightly more than total female labor used; in Dokur, Shurapur, Kanzara, and Kinkhedla, however, the total female labor used on crops exceeded total male labor. Increasing amounts of cotton and irrigation seem to imply increasing employment potentials for women in these villages. These high proportions of female labor used on agricultural land far exceed the 20 percent figure cited for Asia by Boserup (1970). Little work on crops is done by children. In all six villages the proportion of female labor hired was much greater than the proportion of male labor hired—80 to 90 percent of the labor hired in the Mahbubnagar and Akola villages and 60 to 70 percent of the labor hired in the Sholapur villages was female.⁴

Of the total hired labor used in Aurepalle, Dokur, and Shurapur, 63 to 88 percent consisted of females. In the Akola villages and in Kalman, the share of males and females in total hired labor use was almost equal. Males always represented the larger proportion (64 to 90 percent) of the total family labor utilization, especially in the Mahbubnagar villages.

In this paper we will discuss the functioning of the rural daily hired labor markets in the six villages. Particular attention will be given to the extent to which able-bodied people attempt to participate in the daily hired labor market throughout the year, the probability that they will obtain employment, and the wages they will receive, if successful. These questions will be examined separately for males and for females from the four household categories of labor, as well as small, medium, and large farms, using

3. Due to space limitations, all of the tables and analyses on which this paper is based could not be included. The interested reader is referred to the papers by Ghoshake, Ryan, and Sarm (1978) and Ryan, Ghoshake, and Sarm (1979) for details.

data collected on a two- to four-week recall basis in 1975-76. The data have been smoothed into two-week periods for the subsequent analysis.⁵

PARTICIPATION RATES

The participation rate in the rural daily hired labor market was calculated as the number of person-days of wage work plus work-seeking (involuntary unemployment) in a period, expressed as a proportion of the total number of person-days where participation could have occurred. Work on own farms was excluded. The denominator was calculated using the number of able-bodied people residing in the households at the beginning of the study. We excluded family members who were disabled, regularly at school, less than twelve years old, living permanently outside the village, or employed in regular or professional jobs. Also excluded were permanent servants in the household.

The labor force participation rate was calculated in the same manner as the labor market participation rate, except that person-days of work on own farms were also added to the numerator.⁶

Labor market participation rates for males were significantly lowest in the two Mahbubnagar villages and generally significantly highest in the two Akola villages (table 9.1). Labor market participation rates were all significantly different between pairs of districts for both the adult males and the adult females. For only 7 percent of the time did males in Aurepalle endeavor to find a job in the daily hired labor market. In Kanzara, on the other hand, males participated almost 50 percent of the time. The labor market participation rates for all villages were reduced by the meager participation by members of large-farm households and, to a lesser extent, of medium-farm households. Participation by labor and small-farm households was generally much higher. For males, the highest average labor market participation rate in 1975-76 for the labor and small-farm groups was in Kanzara—0.87 and 0.70, respectively, the lowest was in Aurepalle—0.18 and 0.14, respectively.

Females participated in the labor market substantially more (always significant at the 1 percent level) than males in Mahbubnagar villages and in Kinkhedla, whereas in other villages males participated significantly more

4. For details see Suburbanism and Rural India (1978). Most estimates reported here are annual averages. However, the comparisons of labor use by crop group, village, and sex were also made separately for 1974 and 1976 labor use. The labor use statistics for the seasons were consistent with the annual averages.

5. Farm work includes all activities involving agricultural production, such as plowing, sowing, weeding, harvesting, and threshing. It also includes work on other activities such as building repairs and construction, brick-making, and so on. It excludes domestic work.

