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CONTRACTUAL ARRANGEMENTS,
EMPLOYMENT, AND WAGES
IN RURAL LABOR MARKETS IN ASIA

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1994

Vehicles Waiting in the Factory Compound on 2/3/1977

<i>Time</i>	<i>Lorries</i>	<i>Carts</i>
At the beginning of the 1st shift (0400 hrs)	30	54
At the beginning of the 2nd shift (1200 hrs)	32	280
At the beginning of the 3rd shift (2000 hrs)	23	280

Once begun, the harvesting goes on continuously for an average of a little over five months. The factory itself stays in operation round the clock: there is a few hours' pause in the deliveries only in the early morning. The rhythm of work is regulated purely according to the milling capacity of the factory. There is absolutely no question of free time or days off. This continuous production process is brought to a standstill only in order to clean the factory one day every fortnight and no work is done that day for that reason alone.

As already explained, the harvest is performed according to a tightly written scenario. The job of the work gangs is to see that there is always enough cane cut and ready for transporting: however, it must be carted off within a few hours of being cut to avoid an excessive drop in the sucrose content. Nevertheless, the process frequently comes to a standstill because of the congestion in deliveries at the factory, electricity cuts, breakdown of machinery or lorries, and other unforeseen but regularly occurring mishaps. These setbacks demand a great capacity for improvisation among the field staff, but it is the workers who actually suffer from this enforced flexibility. All the risks involved in the cutting and transporting are passed on to be borne by them. Whenever production is delayed or the production line broken, cutting is at once halted. The labor contract made with the *mukadams* includes a clause stating that the factory accepts no liability whatsoever for loss of wages resulting from these interruptions in the daily work. The factory not only allows generous margins in the utilization of the cane-cutting work force without paying any extra, but so regulates the harvest that losses arising out of work stoppage fall on the workers alone. The interest of the factory is set above the interests of all others and implies an unlimited subservience on the part of the labor force.

Common Features and Contrasts in Labor Relations in the Semiarid Tropics of India

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The main objectives of this paper are (1) to document and explain labor market arrangements in different agroclimatic and socioeconomic zones on the basis of intensive survey data; (2) to explore linkages of transactions in labor markets with transactions in other markets such as those for credit, draft power, and outputs, as well as linkages between caste status and type of labor performed; and (3) to characterize, as far as possible, the changes, if any, in labor relations over time.

The paper complements the papers by Jodha (chapter 5) and by Ryan and Ghodake (chapter 9) also presented in this volume. The villages and the regions, as well as the data gathering processes, are described in Jodha's paper, which focuses on tenancy relations. The Ryan-Ghodake paper is a quantitative assessment of wages, opportunity cost of labor, and working hours of individuals who participate in the daily labor market. In this paper the focus is on the institutional mechanisms in the daily market and on the market for regular farm servants (RFSs).¹ In the first section we discuss common features of the labor markets studied. The second section focuses on differences in labor demand and income in the three study areas; the third is concerned with differences in markets for RFSs and contract workers. In the last section we interpret the evidence and put forth further hypotheses regarding monopsony labor demand, intercaste competition, market segmentation, and interlinked transactions.

Useful comments on an early draft were made by Pranab Bardhan, Mark R. Rosenzweig, and Benjamin White; the improvements made since this early version owe much to them. The assistance of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in carrying out the work on which this paper is based is gratefully acknowledged.

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1. We use the term "regular farm servant" (RFS) for any laborer whose labor contract exceeds three months.

The paper is based on several different types of data from the ICRISAT village-level studies as (VLS), as explained in table 8.1 (for details of the regions and villages, see chapter 5). The basic sample is the panel of 240 households that have been interviewed monthly as part of the VLS of the ICRISAT since May 1975. Panel interviews focusing on labor relations were conducted from May to August 1979 with members of all farm-size groups, but emphasis was given to collection of information from RFSs. In addition, special informants were selected by four of the authors of this paper, who had resided in these villages for more than two years as investigators. The special informants were primarily asked questions about changes in labor relations over time. Even this information was insufficient to help us understand the rather special features of the Aurepalle labor market discussed in this paper. Therefore, in January and February of 1980 a three-caste census was carried out, from which a further random sample was chosen for the collection of information on wages and other data. We will refer to these data sources as necessary.

COMMON FEATURES OF THE LABOR MARKETS

The labor markets in these six villages consist of several submarkets, as shown in figure 8.1. The irregular market is divided into a market for daily rated labor, where payment is made every day for a fixed number of hours worked; and a market for contract jobs, where farmers or a government agency (directly, or via contractors or labor brokers) give out work—usually on a piece-rate basis. Daily incomes from contract jobs are generally higher than from daily rated jobs, although contract jobs often require longer hours and/or more strenuous work. As opportunities arise, individuals change from the contract job market to the daily rated markets and vice versa.

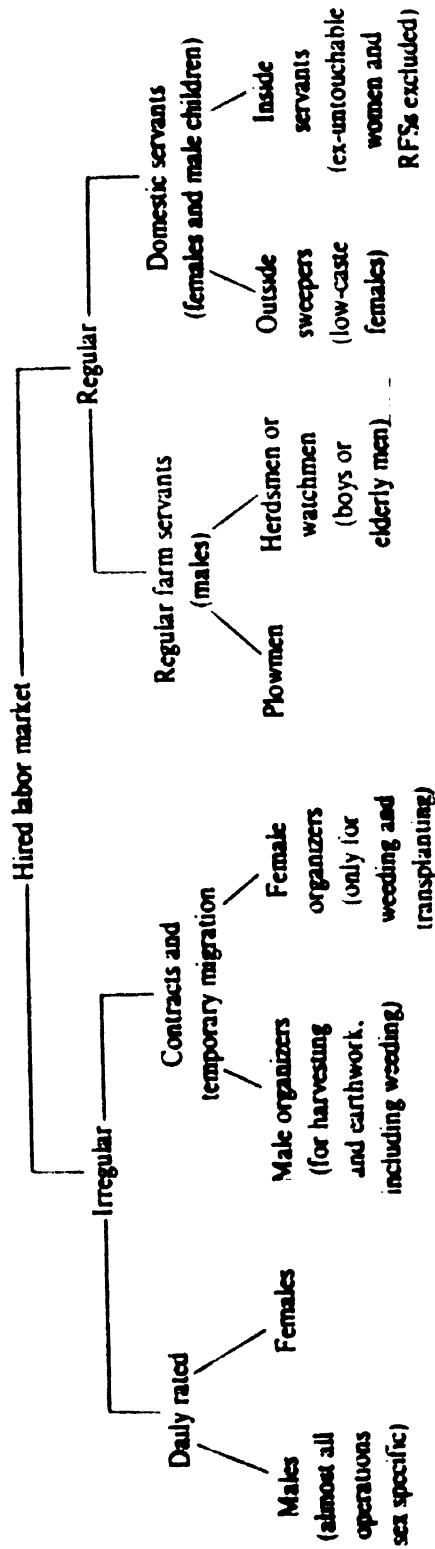
Access to contract jobs is gained via personal networks that may be caste related in some of the villages. Groups for harvesting work or earth-work, or groups of temporary migrants are organized by male leaders who sometimes have formed fairly stable groups with other households. The females recruited into these groups are most often wives or other family members. Groups for hand weeding and paddy transplanting are most often organized by female leaders.

From the interviews with the panel members and with the special informants, it was clear that male-female differences play an important role in access to contract jobs almost everywhere. Caste appeared to play a minor role in the Akola region and the Sholapur region, whereas caste was frequently mentioned as a basis of group formation in the Mahbubnagar area, especially in Aurepalle. This was one of the reasons for organizing the three-caste census and the random sample there. In the process of collecting that information we recognized how difficult it is to understand

TABLE 8.1. Structure of the Data Set

Source	Sample Size	Location	Selection Criteria
Panel	240 households	All villages	Random sample selected in 1975
Panel interviews	More than half	All villages	All households with an RFS, May-August 1979
Special informants	Roughly 20 individuals	All villages	Elderly, articulate community members, May-August 1979
Three-caste census	108 households	Aurepalle only	All Madigas, Malas, and Kurmas of main settlement of Aurepalle, January-February 1980
Three-caste random sample	25 households	Aurepalle only	Random sample from above, February-March 1980

FIGURE 8.1. General Features and Submarkets of the Market for Hired Labor.



the impact of caste on access to labor opportunities, both because informants are not always conscious of it and because they do not like to mention it. Many other features of the villages indicate that our first impression concerning the lesser importance of caste in access to contract jobs in the Maharashtra regions is correct, but a follow-up inquiry of the type made in Aurepalle is currently being carried out in order to trace even subtle influences that might still be present.

In contrast to the contract labor market, the most striking characteristic of the daily rated market for farm work is its essentially impersonal nature. In the evening employers and their RFSs or the wives of the RFSs will go to the workers' houses and invite them for work.² Although they may have preferences for certain workers, especially for jobs requiring certain skills, employers are willing to hire anyone capable of doing the job in this market, regardless of caste or other socioeconomic relationship, if a preferred worker is not available. Similarly, workers are willing to work for any employer. One effect of this is that workers work for a large number of employers in the course of the year.³ (Answers to a question on this point range from twenty employers per year to much higher numbers.) The daily rated market, although less attractive than the market for contract jobs, at least appears to give everyone a chance to participate on nearly equal terms.

A second characteristics, which may stem from the impersonality of relationships in this market, is that a daily rated worker cannot under any circumstances get a loan or an advance from an employer on the basis of a promise that he will work for him in a peak period whenever needed. This is in contrast to findings of Bardhan and Rudra (1978) in eastern India. Without collateral, workers can only obtain loans (interest-bearing debt) or advances (noninterest-bearing debt) from employers by entering into a RSF relationship for a minimum of three months in Akola or for a minimum of one year in all other areas. In all these areas, it is nearly impossible for landless laborers to obtain loans from farmers or moneylenders⁴ without other collateral such as sheep and goats, gold, and utensils, or regular

2. Workers generally do not go and ask farmers for work. Only in Sholapur do some of them do so when very few work opportunities are available. It seems that asking for work puts one in a very poor bargaining position.

3. Obviously, it is possible for both farmers and laborers to avoid partners whom they consider inappropriate because of relative caste status; high-caste workers are not usually expected to work for very low-caste landholders.

4. They can occasionally get small loans in the neighborhood of Rs 5-10 from shopkeepers, farmers, or friends. But any amount in excess of roughly Rs 20-50 requires collateral in the form of long-term labor, or assets, or regular income. Also, in Sholapur some farmers will occasionally accept repayment of a small loan in the form of work if the borrower cannot repay in cash and if the farmer requires labor. But such an agreement is never made when the loan is given.

income from activities such as toddy tapping. The consequence of this, as we shall see, is that a primary motive for entering an RFS arrangement is the possibility of salary advance or loans.

Third, we did not observe tenants or their family members providing labor to their landlord's farm on a preferential basis, in either the regular or the irregular market. Jodha (chapter 5), however, found a few poor landlords working regularly for wages for their tenants in Sholapur as part of the terms of the contract.

Fourth, with the exception of harvesting, agricultural daily rated tasks are sex specific. Males do plowing, female do transplanting and weeding. Even in harvesting and threshing, many operations (such as winnowing) are often done by members of one sex only. However, there are some regional variations in the sexual division of labor. The regular submarket is clearly divided between males and females. In the whole inquiry we found (in the three-caste census) only one female working as an RFS, watching fields. Among the RFSs the plowmen are mostly adults between sixteen and thirty years of age. Herdsmen are usually young boys of ten years or older. Watchmen may be elderly men who are not strong enough for other work; they may also be boys. Domestic servants are females or young boys. Outside sweeping is a one- or two-hour job performed daily by females, usually drawn from any low caste. Women and RFSs from ex-untouchable castes are still excluded from jobs inside the home.

In the regular labor market, linkages with the employer other than via debt are unusual. Of the ninety-eight RFS contracts signed by households in the panel, only three contracts were noted that stipulated that employers should provide bullocks to the RFS to work on the land of the RFS, and in all three contracts the bullock rental rate was to be deducted from the wages of the RFS. With a few exceptions (in Aurepalle), RFS relationships do not constitute long-term or complex patron-client relationships.⁵ They are usually confined to the labor and credit/advance contract, are often of short duration, and usually do not involve other family members. As can be seen from columns 3 and 4 of tables 8.2 and 8.3, families in all areas tend to put only one of their members in this relationship at a time. The number of panel members currently serving as an RFS exceeds the number of families having

5. We did observe a single very long-term relationship in Shirapur in which a son worked as an RFS for thirty-four years, for the same farmer for whom his father had previously worked for a total of more than thirty years. This worker family belonged to the caste of Mahars (ex-untouchables, common in Maharashtra where many of them have become Buddhists) whose occupation has traditionally been characterized by such long-term relationships. This Mahar RFS clearly enjoyed higher wages and superior status relative to other RFSs in the same village: the exceptionally favorable circumstances were presumably what induced him to remain in this relationship.

TABLE 8.2. Participation in the Wage Employment Market and Current and Past Involvement in the Regular Farm Servant Market: Mahabnagar District

Household Group	Present Employment Status (June 1979)				Past Involvement in Permanent Servant Market				
	Number of Households Where Some- one Works for Wages (1)	Number of Households Where Some- one Is an RFS (3)	Number of RFSs Involved (4)	Number of Households Where Some- one Was Ever an RFS (5)	Number of Individuals Involved (6)	Number of Marriage Loans (Households) (7)	Cases without Loans (Households) (8)	Average Years of Total Service (9)	Average Years of Service per Employee (10)
<i>Dokur (Mahabnagar) Panel</i>									
Landless	9	4	5	6	8	1	1	8.8	3.7
Small	10	1	1	5	6	2	2	7.2	2.4
Medium	10	1	1	2	3		1	3.3	2.5
Large	10	2	2	4	7		3	3.6	2.5
Total	39	8	9	17	24	3	7	6.2	2.9
<i>Aurepalle (Mahabnagar) Panel</i>									
Landless	10	6	9	7	12	4	1	5.0	5.2
Small	10	2	2	2	3	3		6.7	4
Medium	9	5							
Large	10								
Total	39	8	11	9	15	7	1	5.8	4.8
<i>Aurepalle (Mahabnagar)</i>									
Caste	Three-Caste Census				Present Status of Three-Caste Random Sample				
Kurma	27	3	5	3	5	3	0	5.4	3.9
Mala	16	6	7	6	7	4	1	4.0	4.0
Madiga	63	34	45	11	15	4	9	3.8	3.8
Total	106	43	57	20	27	11	10	4.1	3.9

TABLE 8.3. Participation in the Wage Employment Market and Current and Past Involvement in the Regular Farm Servant Market: Sholapur and Akola Districts

Household Group	Present Employment Status (June 1979)				Past Involvement in Permanent Servant Market				
	Number of Households Where Some- one Works for Wages (1)	Number of Households Where Some- one is an RFS (2)	Number of Households Where Some- one Was Ever an RFS (3)	Number of RFSs Involved (4)	Number of Individuals Involved (5)	Number of Marriage Loans (Individuals) (6)	Productive Capital Loan (8)	Average Years of Total Service (9)	Average Years of Service per Employer (10)
<i>Shirapur and Kulman (Sholapur)</i>									
Landless	20	20	6	7	10	13	5	12.7*	5.6*
Small	20	20	2	2	9	10	3	6.9	3.4
Medium	18	16	1	1	6	10	1	3.1	1.8
Large	17	12	2	2	2	2	—	—	—
Total	75	68	9	10	27	35	9	7.5*	3.8*
<i>Kanzara and Kinkheda (Akola)</i>									
Landless	17	17	8 ¹	9 ¹	—	—	4	—	—
Small	19	19	8	11	—	—	5	—	—
Medium	20	19	4	4	—	—	—	—	—
Large	20	6	—	—	—	—	—	—	—
Total	76	61	20	24	—	—	9	—	—

Note: Dash (—) indicates not applicable or not available.

* Based on those individuals for whom data on both years and number of employers are available.

¹ We observed only four cases in which a person was involved in a relationship that extended over more than one year. One person was a tractor driver, one was working for relatives, and one was an unskilled RFS.

² These contracts cover only three to four months.

such members by only 20 percent for all villages combined. Furthermore, we did not uncover a single case in the panel where one family sends two or more of its members as an RFS to the same farmer. This appears to be a sensible arrangement if the possibility of obtaining loans or advances is indeed a primary motivation; a family would presumably wish to multiply rather than to limit its number of potentially useful relationships if seeking access to loans or advances in this way.

Male children and elderly men usually work as herdsmen or watchmen; here the credit motivation may not be as overriding. Also, a few RFSs believe that this kind of work is physically less demanding than the work available in the irregular market.

The regular market has very few full-time opportunities for women; such opportunities are restricted to domestic work in wealthy households. Women from ex-untouchable groups are excluded from this opportunity as well. A large number of usually low-caste women do part-time work as outside sweepers.

Since the RFS opportunities are restricted to males, women without personal assets such as land, jewels, or gold cannot usually raise any loans that exceed trivial amounts. The fact that women are excluded from the RFS market and often have access to contract jobs only via their male family members may also explain the very large wage differences and differences in probabilities of employment between males and females observed in these villages by Ryan and Ghodake (chapter 9).

The last common feature is that attempts by farmers to collude to fix wages are common. Farmers in Dokur, Kanzara, and Kinkheda have tried to fix daily wages several times but have failed each time. Laborers are generally unconcerned about possible success of such attempts. The large yield or quality reductions caused by delays in agricultural operations such as seeding, weeding, and harvesting appear to result in competitive pressures on the labor demand side that make collusion unsuccessful.

In Shirapur farmers have tried to fix a (fairly wide) range of cash payments to RFSs. These ranges seem to respond to market conditions and often are not adhered to by farmers. In contrast to this is the impressively successful fixing of salaries and conditions of RFSs in Aurepalle discussed in detail below.

DIFFERENCES IN OVERALL LABOR DEMAND AND INCOME

This section is a brief discussion of differences in labor demand. Quantitative reflections of these differences are given in chapter 9.

Per family with labor income (column 2, table 8.2), Aurepalle has the lowest labor income—only Rs 603 (table 8.4). The demand for agricultural labor has very large seasonal variations. On the Alfisols only one crop per

TABLE 8.4. Monthly Salary Arrangements for Plowmen and Hired Labor Incomes (cash figures in rupees)

Village	Range of Kind Payments* (1)	Range of Cash Payments* (2)	Cash Equivalent of Total Wages* (3)	Interest on Loans Given to RFSs (percent) (4)	Ryan-Ghodake Monthly Wage Equivalent, 1975-76 [†] (5)	Income from Hired Labor Participating per Family, 1976-77 (6)
Mahabnagar District						
Aurepalle	44.5 kg paddy/month (Rs 0.86/kg) + one pair of sandals/year + pinch of tobacco/day	0	43.0/month (panel) 42.5/month (three-caste random sample)	18	53.10	603
Dokur	1 blanket every two years (a) Rs 100		73 121	18	59.10	963
Sholapur District						
Shirapur	27.5 kg of sorghum/month (Rs 1.40/kg)	41.50 62.60	77 98	0	54.00	985
Kalman	Food	75 105	75 105	0	75.00	
Akola District						
Kanzara	Negligible	120	120	May take form of salary reduction	61.50	1,416
Kinkheda	Negligible	120 [‡] 150	120 [‡] 150	Negligible	75.60	

* Adjusted to 1975-76 prices.

[†] Calculated on the assumption that a permanent servant is willing to work for wages 300 days per year, but subject to the village average unemployment probability. See Ryan and Ghodake, table 9.1.

[‡] In this village we found an instance of an RFS being paid Rs 90 per month on a full-year contract, which is extremely rare.

year can be grown and irrigation facilities are limited to 12 percent of the total cropped area. Soils and rainfall patterns in Aurepalle and Dokur are similar, but the extent of irrigation in Dokur is much greater (32 percent of total cropped area) and a substantial proportion of irrigated area is double-cropped, so that agricultural labor demand is both greater and more evenly distributed in Dokur than in Aurepalle. Labor incomes per participating panel family are 50 percent higher in Dokur than in Aurepalle. Neither of the two villages has other nearby sources of labor demand, such as an industrial center or government projects. Some families in Aurepalle send members as rickshaw pullers to Hyderabad (80 km away), but otherwise demand from Hyderabad for unskilled labor does not appear to reach this village. Dokur, which is farther away, is even less affected by urban labor demand. From Dokur many unskilled laborers migrate temporarily over long distances to government projects, but there is no such migration from Aurepalle. This contrast will be discussed again in the following section.

In the Sholapur district agricultural labor demand probably has as much seasonal variation as in Aurepalle. On the most fertile soils only one crop is grown, in the postmonsoon season with residual moisture, and irrigation amounts to only 9 percent of total cropped area. But nonagricultural demand for unskilled or semiskilled labor comes from the city of Sholapur, which is a center of the textile industry. In addition, the Maharashtra government operates several government projects within walking distance of the villages. The construction of percolation tanks meant to increase groundwater and initiated as a relief measure during the severe drought of the early 1970s belongs to a longstanding tradition of publicly operated relief projects. More recently, construction of a canal was begun that draws labor from Shirapur. Labor incomes per participating panel family are therefore as high in Shirapur as in Dokur.

The Akola region is an assured rainfall zone that requires little irrigation. It is a highly commercialized area that has been growing cotton as a major cash crop for centuries. Cotton requires large amounts of labor over a fairly extended harvesting period that begins after the major food crop, sorghum, has been harvested. Nonagricultural demand for unskilled labor comes almost exclusively from nearby government-operated land improvement or irrigation projects, which have been intensified since the mid-1960s. More recently, the Employment Guarantee Program of Maharashtra State makes work available in a systematic way during the period between the cotton harvest and the onset of the subsequent monsoon. For all these reasons labor demand is most steady in the Akola region and this demand is reflected in labor incomes of Rs 1,416 per participating household—more than double the household labor incomes in Aurepalle.

**DIFFERENCES IN MARKETS FOR REGULAR FARM SERVANTS AND
CONTRACT WORKERS**

The differences in the extent and regularity of labor demand appear to have a major impact on the nature and length of contracts entered into in the market for RFSs and on the market for contract jobs.

Akola District

In Akola virtually all wages for hired labor are paid in cash. Because of the high and steady labor demand, RFS contracts are for period of three to five months between the onset of the monsoon and the beginning of the cotton harvest, at which time workers prefer to leave regular employment for harvesting work. The RFS contract period is the leanest season and also coincides with the high-demand period for plowmen. Of the twenty-four RFSs observed in this region, only four had relationships that extended more than one year. One was a tractor driver, another was an RFS with a yearly contract, and the other two worked for periods of three to five months in several successive years.

Table 8.4 compares wages paid to RFSs with what we call the Ryan-Ghodake monthly wage equivalent (see chapter 9). This is the average annual daily wage in the irregular market multiplied by the probability of employment. The table reveals that the RFS wages in Akola exceed the monthly daily wage equivalent by up to 100 percent. Of the twenty-four RFSs, only nine were indebted to their employers. Of the nine cases of indebtedness, five were not loans but advances on wages given without interest. Obviously, interest on advances may be hidden in other terms of the contract. The interest rates charged on two of the loans were comparable to those a money-lender would charge, namely, somewhere between one-quarter and one-half of the principal over a four- to five-month period. One of the advances appeared to include an even higher hidden or implicit interest rate, since the wage rate used for paying back the loans was roughly one-half of the normal monthly wage. Needless to say, at the end of the payment period the worker left his job. All nine loans or advances were taken for marriage purposes. Interlinking of labor and credit transactions therefore seems to be limited in these villages to cases in which laborers or small farmers work off a marriage loan (or advance on salary) over a period of roughly three to five months, during which they are fed by the remaining members of their family.

The smaller of the two Akola villages, Kinkheda, appears to be fairly self-sufficient in terms of labor and neither imports nor exports substantial amounts of it daily. The larger village, Kanzara, has a labor surplus in all seasons except the harvesting season. Since the mid-1960s, when government

projects started to become an important source of employment for the laborers and small farmers of Kanzara, one man of the Mahar caste has become an important organizer of contract labor gangs for these projects. He organizes large gangs of laborers, preferably from his own village but also from other villages if necessary. For one project in 1978, he drew together 900 laborers with the help of organizers from other villages. Of the 900 laborers, 400 came from Kanzara.

On government projects families tend to work as a group and are paid on a piecework basis averaging out to Rs 7.00 or 8.00 per day. This implies that in this area, at least, females do not engage in such work on their own, but only as part of their families. In addition, workers on government projects can purchase highly subsidized food grains as a result of the Food for Work Program.

The *mukadam*, as the labor organizer is called, supervises the work alone or, if there are large groups of laborers, with the help of additional supervisors. He is paid roughly twice a laborer's daily wages for supplying a group of thirty to fifty laborers and supervising them. He may also certify to shopkeepers that some people are working on a government program, after which the workers can take small loans of Rs 10–20 from shopkeepers. It is assumed that he gets some money from the shopkeeper for that service as well. Two women, as well as the *mukadam*, organize large gangs of female workers for weeding during the monsoon season. They only negotiate the wages with the landlords and organize up to fifty women to work in a particular farmer's fields. They take twice a female worker's wages from the farmer for their service. This is the only area in which we found a man organizing gangs of women laborers for a female-specific agricultural operation.

The *mukadam* is well liked by the workers: he was elected to the village *panchayat* in the last two elections and was a member of the *taluka*-level *panchayat* for a two-year term. He seems also to be well liked by the farmers, although small farmers who require only small groups of laborers dislike the fact that they have more trouble getting those workers because of his activities.

A striking feature of the area is that no consumption loans are made at the beginning of the monsoon period to small farmers and landless laborers. At the most, some shopkeepers may advance Rs 10–20 worth of supplies, usually on an interest-free basis and to be repaid very quickly.⁶ It is our impression that the three- to five-month labor contracts that cover the lean season are operating as a substitute for consumption loans. This impression is strengthened by the fact that the monthly wages are often not paid at the end of the month but are given in small amounts of Rs 10–20 every few days, with accounts kept of the amounts paid. Part of these wages

6. Interest may (or may not), of course, be hidden in the price in such circumstances.

is often given in kind but we have heard no complaint that the accounting price of whatever was given in kind was valued above the current market price.

We did not note any caste-based patron-client arrangements. Such a system probably existed in the past. Also, our observations may have been biased, as the Akola sample includes only two families from the lowest castes. But the failure to observe such relationships is to be expected because of the generally open and unlinked nature of labor market transactions in Akola and the free way, for example, in which lowest caste people sit and converse with higher caste individuals.

Sholapur District

In Sholapur the majority of wage payments are in the form of cash. The RFS contracts are annual contracts (table 8.3). Individuals who ever were an RFS did this kind of work for an average of 7.5 years but usually split this period among several employers. Currently there are fewer RFSs in the Sholapur sample than in Akola, or in Aurepalle and Dokur combined.

In Shirapur in the late 1930s, an RFS could earn Rs 40/year in cash and three bags (a total of 330 kg) per year of sorghum. The rate in 1962 for one respondent was Rs 400 plus three bags of sorghum. In 1979 the range was Rs 500–750/year, plus the same three bags of sorghum. In the 1930s there was an optional system, in which payment could be taken exclusively in cash. One respondent earned a flat rate of Rs 100/year and worked for seven years until he was married; the money went to his father, who used it for family needs including the marriage of the respondent's brother. In 1979 there also exists the option of working for cash wages but this is rarely taken.

The basic ration of sorghum (330 kg/year or 28.5 kg/month) can provide an important part of the food needs of an average family. We observed two or three cases where RFSs receive meals for themselves instead of grain, but such cases are rare in Shirapur. However, they are more frequent in Kalman, in the same district. Wages in kind are less important there and are often provided in the form of meals rather than grain.

Shirapur, as already noted, is an exceedingly drought-prone village. The importance of receiving wages in kind is evident. It is not surprising, then, that the basic food grain component of the RFS wage has remained essentially constant over at least the last forty years while the cash component has been driven up by inflation. Workers demand basic security in return for their contract, but employers are unwilling, in a scarcity zone, to assume risks beyond those represented by this level of kind payments.

Several respondents noted that during the drought period beginning in 1972, many RFSs were laid off; the claim of RFSs on their employers

evidently does not extend to being carried through periods of prolonged scarcity. It is an open question whether this readiness to dismiss RFSs during period of great stress is increased by the existence of the drought relief projects discussed in the last section. Most respondents reported that the number of RFSs has declined substantially relative to the pre-1972 period; they ascribe this to the continued availability of employment opportunities from government projects.

The possibility of obtaining the cash portion of the wage as an *interest-free* advance continues to be a major motivation for entering the RFS relationships, and many of these advances are taken for marriage purposes. Usually the cash portion of the wage is given in two or three installments but the advances can be up to the full year's cash portion. Some respondents reported that before 1972 it was possible for an RFS to obtain more than one year's cash portion in advance but such transactions are no longer observed.

The cash equivalent of total wages varies from Rs 75 to 105 and, as in Akola, exceeds the Ryan-Ghodake monthly wage equivalent by a substantial margin.

Contract jobs are given only for harvesting. Labor supply for other agricultural operations—once they are started—is assured by another region-specific feature. If laborers are hired on the first day of a given operation (hand weeding, for example), they will work for several days for the same farmer until completion of the operation, unless sickness or work on their own farms prevents them from doing so. Farmers will stop the work only if forced to do so by weather conditions or lack of funds. During the entire operation, daily wages set on the first day are not renegotiated, regardless of what happens to market wages elsewhere in the village. This system enables farmers to estimate costs at the beginning of an operation nearly as accurately as if they were using contracts.

Groups for government contract jobs are much smaller in Shirapur than in Kanzara and are less formally organized. Although, as elsewhere, they are always organized by males, the groups do include females who are not related to the male members and are hired as required. The network that do operate in these situations may be relatively unstructured, or they may be influenced by such phenomena as caste.

Mahbubnagar District: Aurepalle

The hired labor market in Aurepalle has a number of unique characteristics, many of which are linked to the caste system. Virtually all wages are paid in kind. The data on labor market participation (table 8.5) indicate that none of the members of the first two caste ranks in this village participates in the market for hired labor, whereas in Dokur (in the same district), members from all caste ranks participate. The RFSs are almost exclusively

TABLE 8.5. Caste Rank and Labor Market Participation, 1976-77

Village	Caste Rank*							Total
	7	6	5	4	3	2	1	
Aurepalle	6(6)	9(9)	2(2)	8(10)	0(2)	1(2)	0(9)	26(40)
Dokur	6(6)	2(2)	4(4)	12(12)	5(5)	2(2)	6(9)	37(40)
Shirapur	4(4)	1(1)	9(9)	1(1)	1(1)	2(2)	22(22)	40(40)
Kalman	2(2)	1(1)	8(8)	2(2)	2(3)	2(2)	18(21)	35(39)
Kanzara	1(1)	8(8)	3(3)	1(1)	2(2)	14(17)	6(8)	35(40)
Kinkheda	1(1)	3(3)	2(4)	8(8)	8(9)	0(2)	12(13)	34(40)

Note: To derive these ranks the authors, who were resident for a time in each village, ranked the castes appearing among their regular VLS respondents on the basis of general (social) status. The ranks for each caste were then reassigned, assuming for convenience a possibility of only 7 distinct ranks in any village. The number of castes actually encountered in each sample ranged from 8 to 12.

*7 is the lowest rank, 1 is the highest.

The first figure in each pair is the number of households in a given caste rank that reported any amount of paid or exchange labor participation by any family member during the year 1976-77. The figure in parentheses is the total number of households of that rank in the sample.

recruited from the two lowest caste groups, which is not true in the other regions.

That caste is indeed a major factor in controlling males' access to labor opportunities (except for the daily rated market) is confirmed by the three-caste census data and the random sample from it. Females' access to all labor opportunities except daily rated agricultural labor is influenced by caste.

Members of three castes were interviewed particularly intensively in Aurepalle regarding their labor market participation. Kurmas are shepherds by traditional occupation and are Hindus of low caste rank. Malas are ex-untouchables whose traditional occupation is agricultural labor. Madigas are leatherworkers by traditional occupation, and therefore are also ex-untouchables. Their traditional trade has declined due to availability of industrially produced leather goods or substitutes for leather goods.

Among working males the frequency of participation in the irregular market and the frequency of self-employment (other than as a shepherd) are about the same for the Mala and Kurma castes combined, compared with the Madigas. Only Kurmas work as shepherds; the RFSs come primarily from the Madiga caste—41 percent of all Madiga males currently work as RFSs.

Table 8.6A shows the kinds of work done by those males in the three-caste random sample who do not work as RFSs. Clearly, the Kurmas and Malas have much better access than the Madigas to higher paid contract jobs (primarily well digging or well deepening for farmers—no government

TABLE 8.6A. Days Worked on Different Jobs by Other Than RFSs in Three-Caste Random Sample during Seventeen Days of Observation in February 1980

Caste	Contract Work		Daily Rated Jobs		Average Daily Wages Received		Number of Females Involved
	Alone	As a Group	Tree Cutting or Drainage Clearing		Males Involved	Females	
			Agricultural Operation	Clearing			
Mala + Kurma	7	51	4	33	4.91*	2.39**	17
Madiga	0	4	9	8	3.76*	1.89**	12

* Difference between Madigas and Malas + Kurmas is statistically significant at 5 percent level.
 ** Difference between Madigas and Malas + Kurmas is statistically significant at 10 percent level.

TABLE 8.6B. Primary Occupation of Males by Caste in Three-Caste Census of Aurepalle

Number of Families	Number of Families with an RFS	Number of Working Males	Number of RFSs	Number of Shepherds	Number of Irregular Workers	Number of Self-employed (Including Migrants but Excluding Shepherds)
Mala	18	30	7	0	9	14
Kurma	27	38	5	12	9	12
Mala + Kurma	45	68	12	12	18	26
Madiga	63	111	(18)	(18)	(26)	(38)
			45	0	28	38
			(41)	(0)	(25)	(34)

Note: Figures in brackets are percentages of males.
 * Migrants work as self-employed rickshaw pullers in Hyderabad.

contracts are involved). The average number of hours worked per day in all types of jobs is nearly the same (although work intensity may differ). The better access to contract jobs results in substantially higher average daily wages for the Malas and Kurmas compared with the Madigas, which is statistically significant. Note that for females, the wage rate differences are much smaller but are still significantly different. The wage difference may be attributed in part to the better access to contract jobs for Mala and Kurma women via their male family members.

The main settlement of Aurepalle presently (January–March 1980) has four groups of contract workers, all engaged in digging wells. The core membership of these groups is stable but additional workers are hired as necessary. Three of the groups have mixed caste membership—Malas, Kurmas, Bogama (dancers), Mangali (barbers), Chakali (washermen) or Telaga (cultivators)—but they do not include a single Madiga member. The fourth group comprises exclusively Madiga members.

From the interviews with panel members and special informants, we found that Madigas are socially quite low in this village, where they are known as weak, lazy, and untrustworthy. This reputation is backed up by stories that are gross exaggerations. Twenty Madiga households received forty milk buffalo from government programs with credit provided two years ago, for example. Several informants claimed that all these buffalo were sold and the funds used for consumption purposes. However, of the twenty families, seventeen still have one buffalo and one family has two. Interestingly, the Madigas occasionally described themselves in the same terms and showed signs of insecurity during the interviews. Given this alleged lack of reliability, it is most astonishing to find them concentrated in the RFS jobs, which require regular work attendance and skills in handling of the bullocks. Furthermore, these relationships are based on trust in that they involve debt and present opportunities to steal crop outputs and other things from employers. Malas are also ex-untouchables but are reputed to be trustworthy and hardworking; a certain self-confidence was clearly reflected in their behavior during interviews. Their social status is much more comparable to that of the Kurmas and other poor-caste groups than to that of the Madigas. In the first round of interviews with panel members and special informants, the Malas and high-caste respondents told us that Malas virtually never work as RFSs and that they do virtually all of the physically hard contract work. Only the three-caste census revealed the distortion of reality in these statements (see table 8.6B). But they clearly indicate an ideology that appears to be useful both to the high-caste groups in fixing wages for RFSs and to the Malas and other caste groups in the competition for contract work.

Unlike the situation in all other villages, the RFS relationship in Aurepalle sometimes extends to the wife or another female member of the

RFS household, who performs the duty of outside sweeper and/or calls the female daily rated laborers for the husband's employer, for whom she therefore works whenever the farmer has work at the same rate received by other female laborers. For the calling of laborers and the outside sweeping she gets the equivalent of Rs 24–36/year in the form of various crop outputs and sometimes a sari. Whether or not the female member of the family does perform these duties appears to depend on mutual convenience—no special value is attached to these opportunities.

Even more than in the other regions, RFSs in Aurepalle enter this relationship because of their need for loans. In the panel only one family that ever had a permanent servant had not taken a loan from the employer. A large part of the loan demand arises from ceremonial expenses related to marriage, although consumption loans and medically related loans are also common. Male Madigas at the present time typically spend Rs 1,000 for their marriages, much of it raised as loans from their employers. They normally pay 18 percent interest to their employers for these loans, which is deducted from their wages.

Table 8.4 shows the other normal wage conditions. Wages in Aurepalle are completely paid in kind and the total monthly cash equivalent of these wages is currently Rs 43 per month for the panel (valued at 1975–76 prices), the lowest of any village. It takes the RFSs on average 5.8 years to pay back the debts, at which time these laborers enter the daily wage market again. (They will usually not return to the RFS status unless compelled to by the need for a loan or by physical weakness—and then they become watchmen.) Most of this time is spent with the same employer, although it is possible to change employers if the second employer is willing to buy off the loan from the first. Farmers can refinance these loans by borrowing from moneylenders at 18 percent interest.

Regression equations were fitted to the twenty-seven observations of RFS wages using the following variables: INTRATE = interest rate on loans; AGE = age in years; YRSASRFS = years of experience as regular farm servant; COWHERD = cowherd dummy; KURMALA = dummy variable for Kurmas and Malas. (An *F* test indicated that separate dummy variables for Kurmas and Malas are not required, which is consistent with their otherwise nearly equal social standing.) The following three variables were also tried but were eliminated after an *F* test showed that jointly they did not add to the explanatory power of the regression: age squared, amount of loan outstanding, and a dummy variable indicating whether a female member of the household of the RFS was working as outside sweeper for the employer of the RFS. The final regression is as follows (standard errors are in parentheses and * and ** indicate statistical significance at the 10 percent and 5 percent levels, respectively):

$$\begin{aligned}
 \text{WAGE/MONTH} &= 52.0 - 0.88 \text{ INTRATE}^* + 0.19 \text{ AGE} \\
 &\quad \quad \quad (.43) \quad \quad \quad (.16) \\
 &\quad - 0.11 \text{ YRSASRFS} - 22.54 \text{ COWHERD}^{**} \\
 &\quad \quad \quad (.41) \quad \quad \quad (2.82) \\
 &\quad + 4.31 \text{ KURMALA}^*, \\
 &\quad \quad \quad (2.37) \\
 \bar{R}^2 &= .81, \quad \text{d.f.} = 21, \quad F = 23.7.
 \end{aligned}$$

The regression equation indicates that personal characteristics such as age and experience have little influence on the wage received and that the most massive wage differences are associated with the type of job done (cowherd or plowmen). The regression further shows that Kurmas and Malas are slightly favored over the Madigas in wage payments, which is consistent with the findings in table 8.6A, although the percentage difference in RFS wages is small compared with that in daily wages. The interest rate variable shows that the few favored individuals who pay low interest rates also enjoy other wage benefits. Over 80 percent of the variation in wage conditions is explained by this regression. Although nothing in it clearly supports or contradicts the effectiveness of wage fixing, the fact that personal characteristics have little to do with the wage received is consistent with it.

Although there are individual variations in wage conditions, the wage fixing is perceived by both farmers and laborers as effective. For fifteen years prior to 1977 the agreed-upon wage was fixed at roughly 36 kg of paddy with 24 percent interest on loans. A one-day strike in 1977 organized by the Madigas enabled them to push the base condition to close to 45 kg and 18 percent interests on loans, but a second strike in 1978 was ineffective. The fixity of the wage in kind for RFSs over many years is in sharp contrast to the fluctuations in the wages each year in the irregular labor market (see table 9.1).

The fixity of the wage in kind for permanent servants obviously shifts all the price risk of the labor contrast to the farmer. Given the low wages, laborers are probably quite interested in shifting all the price risk to the farmer and farmers are probably able to carry that risk relatively easily. At the present time, workers are grumbling that they would prefer cash wages because paddy prices are low. However, at the beginning of the VLS in 1975, we understood that workers preferred wage in kind when paddy prices were high.

Table 8.4 shows that in Aurepalle, unlike the other villages, RFS wages are substantially below the Ryan-Ghodake monthly wage equivalent. We will return to this point in the last section, after discussing Dokur.

Mahbubnagar District: Dokur

The main differences between Aurepalle and Dokur are as follows. (1) Labor demand and incomes are much higher in Dokur, as already discussed. (2) All caste groups participate in the hired labor markets, and only the two highest caste groups have never had any RFSs among their family members. (3) The large majority of panel members who were ever RFSs started as herdsmen between the ages of ten and fifteen years, and among those currently serving as RFSs there are only a few plowmen. (Indeed, to collect the wage information for plowmen in table 8.4, we had to go outside the panel households.)

We attribute the low number of plowmen to the superior earnings opportunities available as a result of temporary migration, which apparently has begun since the early 1950s. There is an extensive network of labor subcontractors in the Dokur area that recruits labor for these projects by advancing amounts of from Rs 200 to a maximum of Rs 1,000 to individuals or to units, each made up of a man and his wife, who agree to work for the subcontractor on large government projects for five to eight months. Subcontractors are usually family members of large and medium farmers from Dokur and surrounding villages, and they sometimes gather up to seventy laborers at one time. The advances are financed partly out of the subcontractors' own funds, but most of the money is obtained from the contractors who deal with the government. The projects are often quite far from Dokur; the most distant one we encountered was a railway project in Madhya Pradesh. Wages for both males and females working on these projects range from Rs 75 to Rs 100/month, plus two meals per day plus shelter at the work site. The monthly cash wage is applied against the advance, although workers can further borrow small amounts of Rs 10-50 from the subcontractor while on the job. Medical costs, if provided, are adjusted in full against the worker's salary.

It is clear from our investigation and from the consistent statements of the workers themselves that the demand for advances is the primary motive for participation in this system. Table 8.7 shows that the households that provide RFSs are virtually the same as those which send out temporary migrants. It thus appears that the typical history of an individual in these families is first to work as a herdsman between the ages of ten and fifteen, serving up to the age of sixteen or eighteen, and then to begin daily farm labor supplemented by temporary migration to obtain project work during the dry season. The availability of advances from project work obviates the need for marriage loans from employers of the RFSs: in table 8.2, column 7, there are only three such cases out of twenty-four. Furthermore, in seven out of twenty-four cases, RFSs in Dokur did not take any loans from their employers.

TABLE 8.7. Temporary Migrants in Dokur

Landholding Class	1979 Status				Past Involvement in Temporary Migration			
	Households with Temporary Migrants		Individuals Involved		Households with Temporary Migrants		Individuals Involved	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Landless	3	—	6	13	5 of 6	3 of 3	1 of 1	4 of 5
Small	1	2	3	6	3 of 3	1 of 1	4 of 5	13 of 15
Medium	1	3	1	3	1 of 1	—	—	—
Large	3	6	5	15	—	—	—	—
Total	8	—	15	37	13 of 15	3 of 3	1 of 1	4 of 5

It is not clear whether Dokur ever had as poor conditions for RFSs as were observed in Aurepalle, but the similarities of the social structure and the agroclimate, as well as the proximity of the villages to each other, suggest that the situations may have been the same. The additional flexibility and opportunity to work and to take advances made possible by temporary migration appear to have transformed labor relations to a degree in Dokur, in favor of the laborers. Large farmers and high-caste farmers have also responded to the improved labor market opportunities by participating much more actively than their Aurepalle colleagues.

INTERPRETATION AND HYPOTHESES

In this section we interpret the evidence presented in this paper, placing special emphasis on the observed differences in the contract and RFS submarkets. Clearly, since we have only six villages, many of our interpretations cannot be verified statistically, and since they are based upon many exogenous variables, alternative interpretations are possible. However, our interpretations have to be evaluated in conjunction with the many pieces of evidence presented in this paper as well as in the two companion papers on the same villages included in this volume (see chapter 5 and 9).

Importance of the Amount and Alternative Sources of Labor Demand

The presence or absence of substantial labor demand influences conditions in all submarkets. In Akola steady agricultural labor demand and demand from nearby government projects combine to put laborers in a superior bargaining position that is reflected in high wages and high incomes in all submarkets. Annual contracts have given way to shorter contracts, which enable laborers to shift to the submarket with the most attractive terms in the course of the year. Furthermore, we believe that this steady demand has led to substantial erosion of the role of caste in controlling access to labor opportunities, although sexual differentiation has been fully maintained here as elsewhere. We think that the operating factor here has been the growth of an agroeconomic environment in which there is steady demand for labor from a variety of alternative sources. Moreover, we feel that the Maharashtra State government's Guaranteed Employment Program has been instrumental in the consolidation of these gains in the conditions of rural labor, providing an important addition to the labor demand that began at least a hundred years ago to grow with the greatly increasing importance of cotton in the area.

In the Sholapur district, alternative labor opportunities have existed for a long time, as we noted earlier in our discussion of the growth of Sholapur city as a mill town and of the long history of drought relief works in that

area. Even though they are less well off than their Akola counterparts, laborers in Sholapur still enjoy fairly favorable conditions. Also, the recent intensification of government projects seems to have led to a decrease in the importance of RFS relationships and to have made them looser.

Although Dokur has neither nearby government projects nor an urban labor demand, the strong labor demand coming from irrigation, in combination with the opportunities to migrate, results in fairly substantial labor incomes. The migration opportunities provide an alternative source of loans and employment to the RFS relationship and this employment has virtually replaced RFS work for adult males. Such beneficial effect on the labor market where migrants originate must be kept in mind when interpreting the bleak conditions that the temporary migrants may face at their locations of work and that are so well documented in Breman's paper (chapter 7). In important ways both the migrants and those whom they have left behind are better off.

Monopsony and Caste Competition in Aurepalle

Laborers in Aurepalle are penalized in all submarkets for the low level of labor demand from local agriculture and the absence of other opportunities. It is this absence of other local or more distant opportunities combined with the strong traditional caste system that appears to enable farmers to exercise monopsony control in at least the market for plowmen. This is the only village in which payments to plowmen fall substantially short of the Ryan-Ghodake monthly wage equivalent, and this shortfall may be interpreted as a monopsony rent.

For the monopsony hypothesis to hold, it is quite immaterial whether workers respond to the low wages offered in the submarket for plowmen by selecting themselves into these positions if they find them attractive relative to other opportunities. The RFSs may indeed be the physically weaker members of the labor force although the skill requirements are probably higher for these positions than for the more lucrative earth-digging contract jobs. (This statement is consistent with the higher wages received by plowmen in other areas relative to the Ryan-Ghodake monthly wage equivalent.) Selection is simply a response on the labor supply side to the conditions offered on the demand side, and whether these offers are low because of collusion or for other reasons is quite immaterial for the interpretation of these supply-related phenomena.

Furthermore, we believe that self-selection alone could not account for the very low wages of plowmen in Aurepalle. Personal characteristics such as age and experience fail to have a statistically significant effect on plowmen's wages whereas caste does. Access to the more lucrative contract work opportunities is also caste related.

In further support of the monopsony hypothesis one needs to take into

account the caste-related ideological superstructure used to justify the low wages. Since the majority of RFSs come from the allegedly weak, lazy, and unreliable Madiga group their "low productivity justifies the low wages" in the eyes of the villagers. Ideology seems to be used as a means to support farmer's control over this group of laborers although, as mentioned before, the ideology is at best a massive exaggeration.

But why do RFSs from the Madiga and other low-caste groups go into so much debt for marriage when they have such a hard time paying it back and clearly dislike the RFS status? (They usually do not return to it unless forced to by misfortune.) The most likely reason is the necessity—frequently stressed by respondents when pressed on this issue—to validate themselves relative to their own caste group. Since access to many labor opportunities is indeed influenced substantially by caste, and since other economic opportunities are also caste related,⁷ expenditures on marriage for validation purposes may well be a rational investment decision, apart from the social benefits of being a well-respected member of one's caste.

In Aurepalle intercaste competition for contract jobs also seems to exist and suggests an interest on the part of the Malas as well as on the part of the high castes in supporting the local ideology of the inferior Madiga. This could be so despite the fact that Malas suffer from the same untouchability restrictions as Madigas. These restrictions still prevent them from taking water from wells of caste Hindus, continue to force them to stand in their presence and to give high-caste members other marks of respect, and prevent them from performing RFS duties that require inside work.

Labor Market Segmentation

Throughout this paper we have avoided using the term "labor market segmentation." An operationally meaningful definition of segmentation must imply that (1) the segments of the market include distinctly different groups of individuals differentiated by such characteristics as caste, sex, age, wealth, or education, *and* (2) the individuals can move from one segment to another only with substantial difficulty. If individuals are not essentially immobile between the submarkets that form the different segments, wages in the submarkets will vary to compensate for differences in employment conditions such as hours of work, intensity of work, or skill requirements. Furthermore, if the groups in the segments are not identifiable by clear-cut characteristics or are mobile between submarkets, segmentation may hurt some individuals relative to others, but it will not penalize or benefit entire socioeconomic groups (and possibly, as a result, this will call for policy intervention on behalf of the specific groups).

7. Madigas, for example, have been exclusive beneficiaries of a government housing scheme and a buffalo distribution scheme in Aurepalle.

Defined in this way, segmentation is virtually absent in the male submarkets in all villages except possibly Aurepalle. Participation in all submarkets is too broad-based and mobility among them is too high to consider them segments. Even in Aurepalle one may not want to use the term "market segment" to refer to the male RFS submarket and the market for contract jobs. The RFS submarket includes primarily poor young males, but virtually all of them leave that submarket before they reach the age of thirty, although often with great difficulty. Madigas predominate in this submarket, but other caste groups also participate in it, so it cannot be termed a caste-based segment in any case. The market for contract jobs is accessible by members of all castes, although Madigas may have more difficulty in entering it. But it is clearly not a segment since there is substantial mobility between this submarket and the daily rated submarket.

On the other hand, one can clearly see distinct male and female segments in the markets in all villages. The male segments are generally not accessible to the females with very few exceptions, such as some of the harvesting operations and some of the earth-digging contract jobs. Even in these earth-digging jobs the women generally do different tasks than the men; in all villages (with the exception of Shirapur) they have access to such jobs only via their male family members. In the regular submarket, as discussed earlier, females are also excluded from the submarket for plowmen and herdsmen. (Only one woman was observed watching crops.) The women are restricted to the few domestic servant jobs available.

Males, of course, cannot generally move into women's jobs either, except for some elderly men or young children who participate in hand weeding, or boys who work as inside servants. But males would hardly desire to participate in the female submarkets. Male wages (adjusted for hours worked) in the irregular markets of these villages are roughly 80 percent higher than female wages. Male probabilities of employment are much higher as well (see Ryan, Ghodake, and Sarin, table 3). Segmentation clearly works in favor of the males and at the expense of the females.

Ideological support for this segmentation is strong. A taboo prevents women from touching the plow and, as in other societies, males who do domestic chores or other female-specific tasks are ridiculed. Low wages for women are attributed—by both males and females—to the lack of physical strength and stamina of women. One need only see the loads carried by them and the discipline evident in the paddy transplanting lines to realize that the large observed wage differentials can hardly be explained in this way.

Tied Transactions

Tied transactions as a means by which the more powerful extract favorable terms for themselves in transactions with poorer partners have become a

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

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 McDiarmid (1977), Bardhan (1977), and Branson and Jesse (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 ICRISAT economics program.¹ Details of the labor utilization of each family member and of hired personnel were obtained. These data related to both on-farm and off-farm activities as well as to household use.²

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1. For a detailed description of the methodology, the villages and the complete range of information obtained, see Jodha (chapter 5).

2. The on- and off-farm activities were collected on a two- to four-week full recall base. Household time allocation of each household member was collected only for the day immediately preceding each interview.