

**PEASANT IMMIGRATION AND AGRARIAN CHANGE**  
**A Case Study from Raichur District of Karnataka**

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**GOTLA NAGARAJU**



**CENTRE FOR DEVELOPMENT STUDIES**  
**TRIVANDRUM**

**1989**

## CERTIFICATE

I here by affirm that the research work for this dissertation titled "Peasant Immigration and Agrarin Change: A Study from Raichur District of Karnataka" being submitted to the Jawaharlal Nehru University for the award of Master of Philosophy, was carried out entirely by me at the Centre for Development Studies, Trivandrum.

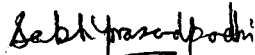
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Supervisors



Dr. S. P. Padhi



Dr. G. N. Rao

  
The Director,

Centre For Development Studies.

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## Chapter 1

### INTRODUCTION

If one surveys the theoretical and empirical literature on internal migration, the general questions that are raised and analysed in it can be put under three sets of issues, namely, (i) Determinants of migration, (ii) Patterns of migration, and (iii) Role or consequences of migration. More specifically, in the study of determinants, patterns and role of migration, the following questions are asked: What are the underlying factors in the decisions regarding migration? What are the directions of movement? What are the economic and social class pattern as well as age, sex, educational and occupational characteristics of migrants? How does migration affect the structure and function of the labour market?

Such questions have thrown up a number of theoretical propositions and analytical approaches. To start with the analysis of determinants of migration, the various approaches can be put under two broad perspectives based on the underlying assumptions and arguments, namely, micro-economic and historical-structural perspectives (Wood, 1981).

In the micro-economic perspective, the focus is on the cost-benefit calculus undertaken by potential migrants as they confront rural-urban wage, employment and amenity differentials. According to this framework, population movement is conceptualised as the geographic mobility of workers who are responding to spatial distribution of the factors of production in an individually rational way: labour moves from places where capital is scarce and labour is plentiful (hence remuneration to

the worker is low), to places where capital is abundant and labour is scarce (hence remuneration is high) (Spengler and Myers, 1977). In this way, migration flows are the cumulative result of individual decisions based on the rational evaluation of the benefits to be gained and the costs entailed in moving. This basic model has been extended to incorporate the factors which enter into the individual choice function, such as the nature, extent and sources of information available regarding urban income structure and employment opportunities; the utility significance of the costs and benefits to the agent making the decision; and "lifetime" income, defined as the present value of expected future income (Sjaastad, 1962). The model has been further extended to take into account the highly segmented labour markets in urban areas of developing countries by including the probability of obtaining desirable employment in the modern sector (Todaro, 1969).

The historical-structural perspective has been developed mainly as a critical response to the micro-economic perspective. According to this framework, while the micro-economic model of migration captures the essence of the individual rational calculus, it offers little insight into the structural changes which make certain choices possible and/or compel the decision to move in the first place. Thus the historical-structural perspective assumes that explanation for population movement must probe deeply into pressures and counter pressures that lead to changes in the organisation of production. In this approach, the focus is on the mechanisms by which social, economic and political forces directly and indirectly affect the demand for labour and the associated forms of labour recruitment and



remuneration (Brueman, 1985). In short, the historical-structural perspective emphasises a dynamic view of the overall structure of the economy which makes certain choices possible and necessary.

There are of course certain models of the causes of migration which attempt to combine elements from the two broad perspectives described above, e.g., the push-pull model may be thought of as one such formulation.

Coming to the analysis of patterns of migration, we may refer to the specific propositions formulated long back (Revenstine, 1885, cited in Adepoju, 1977), known as Revenstine's Laws which run as follows: (i) Magnitude of migration and the distance of movement are inversely related, (ii) Inhabitants of a village tend to move first towards nearby towns, and from there to the cities, (iii) In short distance migrations, females dominate males, (iv) Urban people show more migratory tendency than rural people, etc.

With reference to the direction of movement, Okum and Richardson (cited in Adepoju, 1977) have proposed a relation between the level of percapita income and the stage of development of regions on one hand and the direction of migration flow on the other. The authors have postulated four types of regions : a stagnant region with low per capita income (LS), a stagnant region with high per capita income (HS), growing region with low per capita income (LG), and growing region with high per capita income (HG). The authors argue that logical flows occur only at the upper right side of the matrix as shown in Figure 1.1

**Figure 1.1 : Hypothesised Direction of Migration Flows**

from	To ->	LS	HS	LG	HG
LS		-	x	x	x
HS		-	-	x	x
LG		-	-	-	x
HG		-	-	-	-

What is to be noted from our general review of the literature on internal migration is that most of it is concerned with the issues of determinants and patterns of migration and very little with the possible dynamic role and consequences of migration. In order to see why this is so, we have to introduce the idea of two types of migration which need to be sharply distinguished.

Broadly speaking, these two types of migration are defined on the basis of their relationship with the process of economic development and may be characterised as (i) Development-initiating migration and (ii) Development-fostering migration.

The first type of migration is a case where migrants generally initiate development of unexploited resource at the destination or/and use their skills and techniques or information (generally not known to local population) to act as pioneers of development process. This sort of migration may also be called as development-leading migration. Generally, the direction of movement in this case will be from developed/advanced region to less developed/backward region.

The second type of migration is a case where migrants get attracted towards an ongoing development process, usually to secure employment for themselves. The migrants would simply join the development process and thus they may foster the

development process by participating in it. Here, unlike in the earlier case, migrants generally won't have anything to actively initiate, but their part is a much more passive one of simply adjusting themselves to the employment opportunities. Such migration may also be called as development-led migration, and commonly identified as labour migration. The direction of this type of migration will typically be opposite to that of the first type, i.e., from less developed/backward region to developed/advanced region.

Peterson rightly distinguishes between these two types of migration as follows: "Some persons migrate as a means of achieving the new. Let us term such migration innovative. Others migrate in response to change in conditions, in order to retain what they had; they move geographically in order to remain where they are in all other respects. Let us term such migration as conservative" (W.Peterson, 1970, p, 53) Green roughly links the first type of migration with 'colonisation' and the second type with 'urbanisation' (L.Green, 1969), though rural to rural migration of the 'conservative' type may still be quite important in an agrarian economy.

In the context of the above distinction between two types of migration, one can readily see that the existing literature is mostly concerned with the second type of migration, namely, rural to rural and rural to urban labour migration in search of, or in response to, employment opportunities. Because of this, it is not surprising that much of the existing literature does not address itself to the question of the dynamic role and consequences of migration.

Therefore, the available perspectives on the determinants and patterns of migration (as briefly reviewed above) will not be appropriate in the context of the study of 'innovative migration'; moreover, the question of the dynamic role and consequences of such innovative migration cannot be raised within the existing perspectives concerned with labour migration. In short, innovative migration would be inherently different from labour migration with respect to causes, patterns and dynamic consequences and hence the study of it requires a different framework.

In the context of agrarian economies of the Third World, migration of enterprising peasant farmers can be a typical form of innovative migration. In fact, there are several examples of the dynamic and active role played by such migration flow.

In one of the early studies of its kind on migrant cocoa-farmers in Ghana (Hill, 1970), it has been noted: "...the Ghanaian migrant cocoa-farmer has shown himself to be remarkably responsive to economic incentives, remarkably dedicated to...the pursuit of economic ends. The whole operation was based on saving or accumulation, by all the various parties involved, and on the long view. The notion of 'getting rich quick' and then going out of business and retiring to the homeland did not exist" (Ibid., p.3)

Again, the study on innovative migration in Africa by Mobagunje (1972) points out how by introducing certain institutions, techniques, crops and values, migrants brought about significant resource development in different parts of Western Africa. The same study points out how the Ghanaian fishermen migrants of 'Sarkawa' community were instrumental in

the diffusion of improved techniques of fishing to 'Kebbawa' fishing community of Sierra Leone.

In the case of Bangladesh, it has been reported (cited in Boyce, 1978, p.146) that immigrants to Dinajpur district from more densely populated eastern districts introduced double cropping in place of the single crop mainly produced by local big landowners from whom they bought land. Similarly in the 1940s, immigrants from Mymensingh district to one locality in Rangpur district introduced an early maturing spring season rice crop which could be harvested before the transplanting of the rainy season rice crop on the same land.

There are examples (cited in Bray, 1986, p.44) of spatial diffusion of improved techniques via migration in China and Burma: marked contrasts existed between the Lower and Upper Yangzi provinces until heavy migration from the delta to Hunan and Hubei in the 16th and 17th centuries imposed the use of more productive techniques. Similar differences existed between Upper and Lower Burma up to the early 20th century, when migrants from the densely settled plain of Mandalay introduced technical improvements to the Burmese delta.

There are a few recent studies in India which also bring out the positive role played by migration flows of the innovative type. For example, in Kerala, a large number of Travancore farmers who migrated to Malabar jungles and cleared large areas of virgin forests to cultivate commercial crops and plantations (Joseph, 1988). It was also found that most of the migrants improved their economic status. But the growing success of the efforts of the Travancorean settlers had only a marginal impact

on the local population and capital formation in agriculture in migrant villages was more than in other villages.

Another prominent flow of innovative migrants which has been studied is that of enterprising farmers from Coastal Andhra Pradesh to other parts, within and outside the State of Andhra Pradesh (Rao, 1986; Anjaneyaswamy, 1988), which emphasise the enterprising role played by these migrant framers.

#### Objective of the Present Study

The above examples of the positive effects of migration may be thought of as representing a variant of the induced innovation hypothesis, according to which population growth has a positive long-run effect by inducing output-raising technical change through specialisation and intensification (Boserup, 1965). In the present case, the inducement mechanism works through the spilling over of population growth in one region to another via migration. In terms of the dynamic consequences of peasant migration, such migration-induced, essentially land-saving technical change can be thought of as consisting of two processes: a process of spatial diffusion of land-saving techniques (which has to do with adoption by migrant farmers already familiar with such techniques at the point of origin) and a process of lateral diffusion of techniques to local farmers at the point of destination (which has to do with interaction between migrant and local farmers and a successful transition from dry land, extensive cultivation to intensive cultivation on the part of local farmers).

The present study makes use of the induced innovation hypothesis to see whether or not the inducement mechanism in

terms of both the above mentioned processes has been at work. In this connection, the problem is also to study the role of peasant migrants in the activation of agrarian markets. In the case of peasant immigration from 'Coastal Andhra, with a long history of intensive, irrigated agriculture' into Raichur district with traditional dry land farming and which witnessed the introduction of a large-scale public irrigation scheme of Tungabhadra Project, seems to be appropriate to study the dynamic consequences of peasant immigration.

#### Sources of Data

The analysis is broadly at district level, the information for which is collected from various sources like Census of India, Indian Agricultural Statistics etc. However, the work principally depends on a village primary survey, wherein quantitative as well as qualitative data were collected from both migrant and local farmers. Village survey was especially necessary as we intended to distinguish the roles played by migrants and locals in the overall post-irrigation developments in the area, and also to get the relative performance of locals and migrants. The selection of district and village for the study and the mode of sample survey are discussed below.

The Selection of District: Tungabhadra project irrigates lands belonging to four districts, two each in Andhra Pradesh (Kurnool and Cuddapah) and Karnataka (Raichur and Bellary). Coastal Andhra farmers migrated into the ayacut lands of all these four districts. But the incidence of their migration into Raichur district was more prominent as compared to the other districts.

This was mainly because: the water availability in this district was throughout the year, whereas it was only for one season in the other districts. Hence, Raichur district has been selected for study.

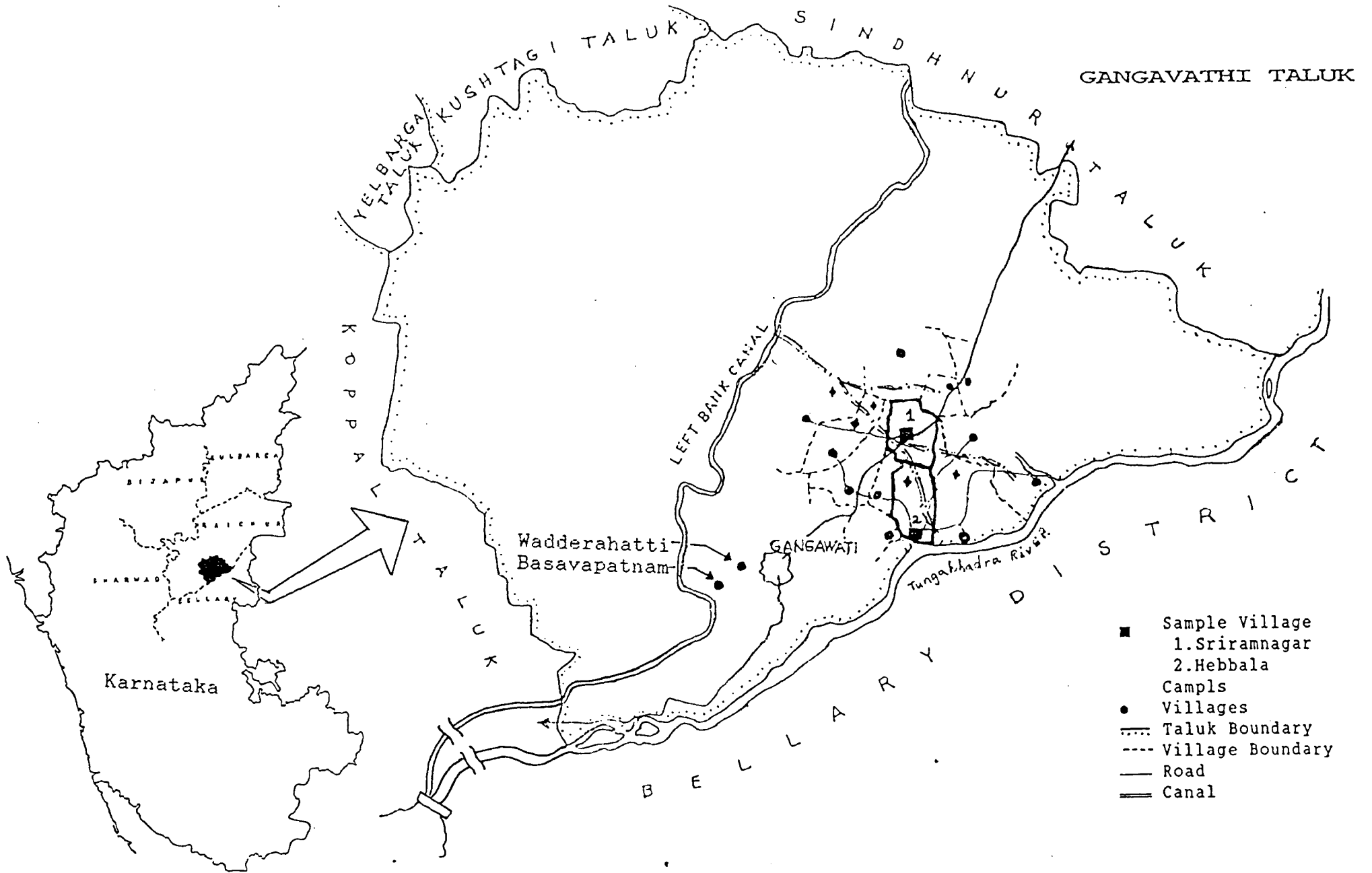
The selection of Village: The village chosen for survey should have quite a substantial presence of migrant farmers right through the post-irrigation period, with assured perennial water supply and accessibility to road. From among the many such villages satisfying these criteria, Hebbala was chosen for the following reasons.

In the pre-irrigation period, Hebbala was well known as a bigger village amidst a number of small villages of the Gangavathi taluk. With the commencement of irrigation, the village was given water through the 25th distributary, one of the important and largest distributaries of Left Bank Canal of Tungabhadra Project. Migrants established a settlement in the village administrative area around 1957, at around 5 km away from Hebbala.

By 1973, the migrants' settlement grew so big in population, that it was given the status of a separate village. The administrative circle of Hebbala was almost divided into half so as to form village (camp) Sriramnagar out of it. Until now, Sriramnagar is the only such migrants-based village that has been given a separate village status in Gangavathi taluk. Hence owing to its importance, we have chosen Sriramnagar and Hebbala for our study (see Map 1).



MAP 1



Mode of sample survey: Two sets of farmers, one of local farmers from Hebbala and another of migrants from Sriramnagar, each numbering 50, were interviewed. Prepared questionnaires were used separately for migrants and the locals.

Farmers were selected using random sampling method from the lists of land holding households, collected from the Mandal Panchayat secretary of Sriramnagar, for both Sriramnagar and Hebbala (Sriramnagar is the present Mandal Panchayat headquarters for around 15 surrounding villages, including Hebbala). The sample survey was conducted between October and December of 1988.

Apart from data collection through structured questionnaires, relevant qualitative information was also collected by interviewing pioneer migrants and elderly locals. The Pioneer migrants were asked especially about the initial conditions at the destination at the time of their migration. And the elderly locals were asked about their socio-economic conditions and their reaction to the irrigation and the ensuring migration.

Irrigation offices at Wadderahatti, the Divisional Office (Division 1, under which 25th distributary comes) and at Hospet, the Head Office of Left Bank Canal (LBC), were visited to collect data about the irrigation system and irrigation officers were interviewed about the general problems in the irrigation of the area. Certain data were also collected from the Taluk office and the Land Registration Office at Gangavathi.

The study is organised as follows. In Chapter 2, certain specific features of the agrarian structure of Raichur district

in the pre-irrigation period and the underlying agro-climatic, technological, and demographic conditions are touched upon in order to highlight the agrarian conditions at the time of peasant immigration. We also briefly document the relatively more impressive growth performance of the district in the post-irrigation period when immigration flows occurred. Chapter 3 looks at the determinants and patterns of peasant immigration. Chapter 4 analyses the evolution of agrarian markets, the nature and extent of participation of immigrant and local farmers in them so as to highlight the differential access to resources and extent of investments and the relative economic position of the locals and the immigrants. In the end, we spell out some general conclusions of the study.

## Chapter 2-

### AGRARIAN CONDITIONS OF RAICHUR DISTRICT BEFORE AND AFTER IRRIGATION : AN OVERVIEW

Raichur district is located in the north-eastern part of the present Karnataka state. Before the States' Reorganisation Act, 1956, the district was a part of the then existing Hyderabad State. With the dissolution of Hyderabad State, Raichur district, with minor boarder changes,<sup>1</sup> was made a district of the then Mysore State.

The district has got a geography of long stretches of treeless plains, large part of it being black cotton soil, and bare hillocks here and there. It forms a doab between two perennial rivers, on north by Krishna and on south by Tungabhadra. The plains of the district thus have got a natural advantage of utilising the river water for irrigation. But it was not till the Tungabhadra Dam was built in early 1950's that the district enjoyed any large scale irrigation, and which became a driving force for the highly significant performance of agriculture in the subsequent period. But, before the advent of irrigation, the district was characterised by chronic scarcity and agricultural stagnation. Therefore, for a contrasting picturisation of pre- and post-irrigation agriculture we, therefore, divide the present chapter into two sections. In the first section, we depict the general agrarian conditions of the district before 1956, i.e.,

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<sup>1</sup>Two far east taluks of the district, viz., Alampur and Gadwal, where Telugu speaking people form majority, were included in Andhra Pradesh.

pre-irrigation period. And in the next section, we give an overview of agricultural performance of the district in the post-irrigation period.

From the point of view of the study of peasant migration (which started simultaneously with the coming of irrigation), this chapter has a two-fold purpose: firstly, to give an idea regarding the preexisting agrarian conditions of the district at the time of migration (as contrasted with the conditions at the source of migration, to be taken up in the next chapter); second, given a dynamic process of agrarian expansion and growth in the post-irrigation period, the question of how far both migrant and local farmers participated in the growth process and, in particular, the role of migrants in it, can be raised.

### **AGRARIAN CONDITIONS IN PRE-IRRIGATION PERIOD**

Since our purpose is to highlight the agrarian conditions in the pre-irrigation period, it suffices to look at the data for the immediate pre-irrigation period, for most purposes. Here, we shall present a descriptive account of certain crucial agro-climatic, technological and demographic conditions which resulted in certain features of the agrarian structure, such as large owner-occupied holdings, extensive cultivation and little development of land and labour markets.

#### Cropping Pattern and Productivity of Land

One of the most binding agro-climatic characteristics of Raichur district was the level of rainfall: the normal annual rainfall was as low as about 600 mm. and all this was

concentrated in only about 37 rainy days in a year. This was more or less true of all parts of the district (Table 2.1)

Table 2.1 : Average Number of Rainy Days and Rainfall in Raichur district

Rain Gauge Station	Number of Rainy Days	Rainfall in m.m.
Raichur	46.8	729.61
Linsugur	41.1	571.64
Deodurg	33.2	611.52
Manvi	34.6	660.04
Kustagi	35.1	545.06
Koppal	33.7	576.24
Sindhaur	35.8	551.22
Yalaburga	34.2	560.81
Gangavathi	34.3	536.09
District Average	36.53	593.58

Source: District Census Hand Book, Raichur District, 1961.

Moreover, the incidence of rainfall was known to be highly irregular over time. According to the Census Report of 1951, "The peasantry (of the district) is almost used to expect untimely or insufficient rainfall at least every alternate year and a famine once in every decade" (Census Report, 1951, p.18).

Though this was a region of low and uncertain rainfall, artificial irrigation was little developed: net irrigated area was less than two percent of net sown area (Table 2.2).

Table 2.2 : Net Irrigated Area as Percentage of Net Sown Area : Raichur District, 1950-56

Year	Net Irrigated Area as % of Net Sown Area
1950-51	0.65
51-52	1.01
52-53	1.03
53-54	0.96
54-55	1.32
55-56	1.23

Source: Agriculture Statistics of India, Vol II, various issues.

Given such a low level of rainfall and irrigation, we find that the cropping pattern of the district was geared towards low availability of water: dry crops like Jowar, Groundnut, and Cotton predominated the cropping pattern (Table 2.3).

Table 2.3 : Area (%) under Different Crops in Raichur District, 1950-56

year	rice	Jowar	Bajra	Wheat	G.nut	Cotton	NSA(acres)
1950-51	0.87	26.54	3.39	1.77	11.02	28.49	2540802
51-52	1.08	20.61	4.47	1.83	13.48	23.28	2984208
52-53	1.05	31.34	4.67	1.93	12.79	21.39	2790206
53-54	1.06	28.98	5.60	2.07	10.97	24.28	3084192
54-55	1.28	27.87	5.69	1.98	14.46	23.11	3009827
55-56	1.40	31.51	5.09	2.37	11.59	22.83	3118111

Key: NSA = Net Sown Area.

Source: Agriculture Statistics of India, Vol II, various issues.

In addition, pre-irrigation cultivation practices were such that there was an extensive use of land and little use of land-intensive techniques, as can be discerned from the qualitative information collected in the course of our field survey. In general, whereas the land close to the village was more intensively and carefully cultivated by raising food grain crops during the kharif season, distant plots of the holding were usually sown with non-food crops during the rabi season and were also much less intensively cultivated.

Every year, after two or three monsoon rains, around late July and early August, the ploughing would start with a single spiked plough which made deep furrows and loosened the soil. Then, to break the clay clouds, the farmers used what is called 'Bakhar', a blade harrow fitted to a frame similar to that of a plough. After another shower, the farmers went for sowing. Seeds were sown either manually or using 'Tippan', a specially

made plough funnel with a long stem for sowing. The seeds were put in the shallow furrows marked by a plough with two spikes, about a meter apart, being pulled ahead by a pair of bullocks.

After these two important operations of ploughing and sowing, farmers had no work on the field for a month or more, until the plants grew to a certain height. Then there would be the first round of weeding. A second round of weeding was carried out after a gap of about two months. A third round of weeding was not common.

In the case of food crops farming, there used to be a tradition of mixed cropping of one or two rows of Jowar with a row of Bajra or Ragi. Sometimes even pulses used to have a row in four or five rows of usual cereals.

The cultivation of non-food crops was taken up around September-October, after the farmers finished the sowing and weeding operations on the food grain plots. Cotton was the most important among the subsidiary crops and it was grown on the remaining part of the holding near the village after the sowing of food grain crops or on distant lands. Farmers started clearing small grass and weed plants with a plough having a meter long blade, which also loosened the soil on the surface. No deep furrowed ploughing was done like in the case of food grain crops. After that, the farmers waited for a shower before sowing the seed. Sowing was usually done with a 'Tippan', with a shallow furrowing plough going ahead as was done in the case of food crops. Once sowing was over, there was not much of any further work on the cotton farm. Particularly in the case of distant lands, the second visit would be only to harvest the crop. Cotton



harvesting used to simply cut the whole cotton plant and bring it home. After gathering all the plants, cotton used to be picked from the plants. With this kind of crude cultivation practices, cotton yield used to be very low - not more than two quintals per acre.

Thus, the joint effect of low rainfall, absence of artificial irrigation and traditional cultivation practices must have been one of very low land productivity, though we do not have concrete data to substantiate this point. Such a low level of land productivity was at least partly responsible for a relatively low level of population density in this district (Table 2.4).

Table 2.4 : Taluk-wise Density and Percentage Changes of Population of Raichur District\* for the Pre-irrigation Period (1921-51)  
(density: persons per sq.km.)

Taluk	Densities				percentage changes			
	1921	1931	1941	1951	1921-31	1931-41	1941-51	1921-51
Devadurga	54	51	57	58	-4.70	11.65	2.27	8.81
Gangavathi	46	51	55	65	11.21	8.26	18.70	42.92
Koppal	56	61	68	93	7.97	12.48	36.00	65.15
Kustagi	49	57	66	72	17.33	14.68	9.76	47.68
Kingsugur	41	45	54	58	9.47	20.55	7.63	42.02
Manvi	49	48	49	54	-2.07	3.52	8.76	10.25
Raichur	73	81	89	98	11.22	9.87	10.45	34.96
Sindhanur	41	45	47	46	9.67	6.38	-2.16	14.14
Yalaburga	58	60	68	73	2.86	12.61	8.37	25.52
District	51	55	61	68	6.59	11.10	11.21	31.69
State	69	76	85	101	9.38	11.09	19.36	45.03

\* adjusted to the post-1956 boundaries

Source: District Census Handbook, Raichur District, 1961.

Nature of Land Holding, Cropping Intensity and Incidence of Agricultural Labour

Alongwith low land productivity and low population density, another characteristic feature of this district was the very high proportion of cultivable area. This was because of the fact that the district was endowed with vast tracts of treeless plains with little forest and lands not available for cultivation (which together accounted for only about 13 percent of the geographical area of the district). Although by 1955-56, as much as 76 percent of the geographical area was put under the plough, another 11 percent still remained for potential extension of cultivation (Table 2.5). As a result, the ratio of cultivable land to population was relatively high in this district. In conjunction with low productivity of land and low population density, this had a number of implications.

Table 2.5 : Percentages of NSA to Geographical Area

YEAR	% OF GSA TO GEOGRAPHICAL AREA
1950-51	61.71
50-52	72.48
52-53	69.77
53-54	74.91
54-55	73.11
55-56	75.74

Note: Geographical area of the district = 41,17,120 acres.  
Source: Agriculture Statistics of India, Vol II, various issues.

First, the average size of landholding was quite large: according to the Statistical Abstract of Karnataka, 1970-71, this was 15.46 acres in 1955-56. Second, there was no area reported as sown more than once.

The above factors also had a bearing on the extent and composition of agricultural population. For Raichur district as a whole, the proportion of total population principally dependent on agriculture was 77.4 percent in 1951 as against 68 percent for the then Hyderabad state. This proportion was very high (nearly 90 percent) in the case of a number of western taluks of the district. Of this, the proportion of owner-cultivators, in total population of Raichur district was about 57 percent as against 41 percent for the Hyderabad State. This proportion was higher (around 70 percent) in a number of western taluks. Correspondingly, the proportion of tenant cultivators to total population was no more than 5 percent. Again, the proportion of agricultural labour population to total population was about 12.5 percent as against 17.2 percent for the Hyderabad State, signifying a limited development of the labour market.

#### Agricultural Stagnation and Population Growth

The last feature of the agrarian economy of Raichur district to be noted is that it was marked by recurring droughts and famines. In the decade 1921-31, the district faced severe scarcities in six out of ten years, and in the next decade, in nine out of ten years. In 1941-51, the economy suffered in six out of ten years. As the Census Report of 1951 remarked, "Whatever may have been the attractions of Raichur district during the days of Vijayanagar Empire, it is now generally looked upon as a chronic scarcity area" (Op. cit., p.38).



TH2957

At least in part due to such chronic stagnation and periodic collapse of the agrarian economy of the district, the rate of growth of population was both absolutely and relatively low (see Table 2.4 above), though other demographic factors such as high mortality and low fertility also played a role.

### AGRICULTURAL PERFORMANCE OF THE DISTRICT IN THE POST-IRRIGATION PERIOD

It was into such a stagnant agrarian economy characterised by low productivity that a large-scale irrigation facility in the form of Tungabhadra Project was introduced. In this section, we shall briefly describe some salient features of the irrigation system and examine the extent of expansion of irrigated area and cropped area which took place. We shall then see how impressive were the growth performances of agriculture and population in the district during the first 20 years or so in the post-irrigation period.



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#### The Tungabhadra Project

The Tungabhadra Project has got a long history. The proposal for a dam across the river Tungabhadra was first made by Sir Arthur Cotton in his draft report on the project possibilities in 1860. After half a century, the plan was once again reviewed by the First Irrigation Commission in 1902. The river being a border between the erstwhile Madras Presidency and Hyderabad State, the endeavour had to a joint venture. Unfortunately the two States could not come to an understanding on the method of sharing the cost and benefits of the proposed dam until 1944.

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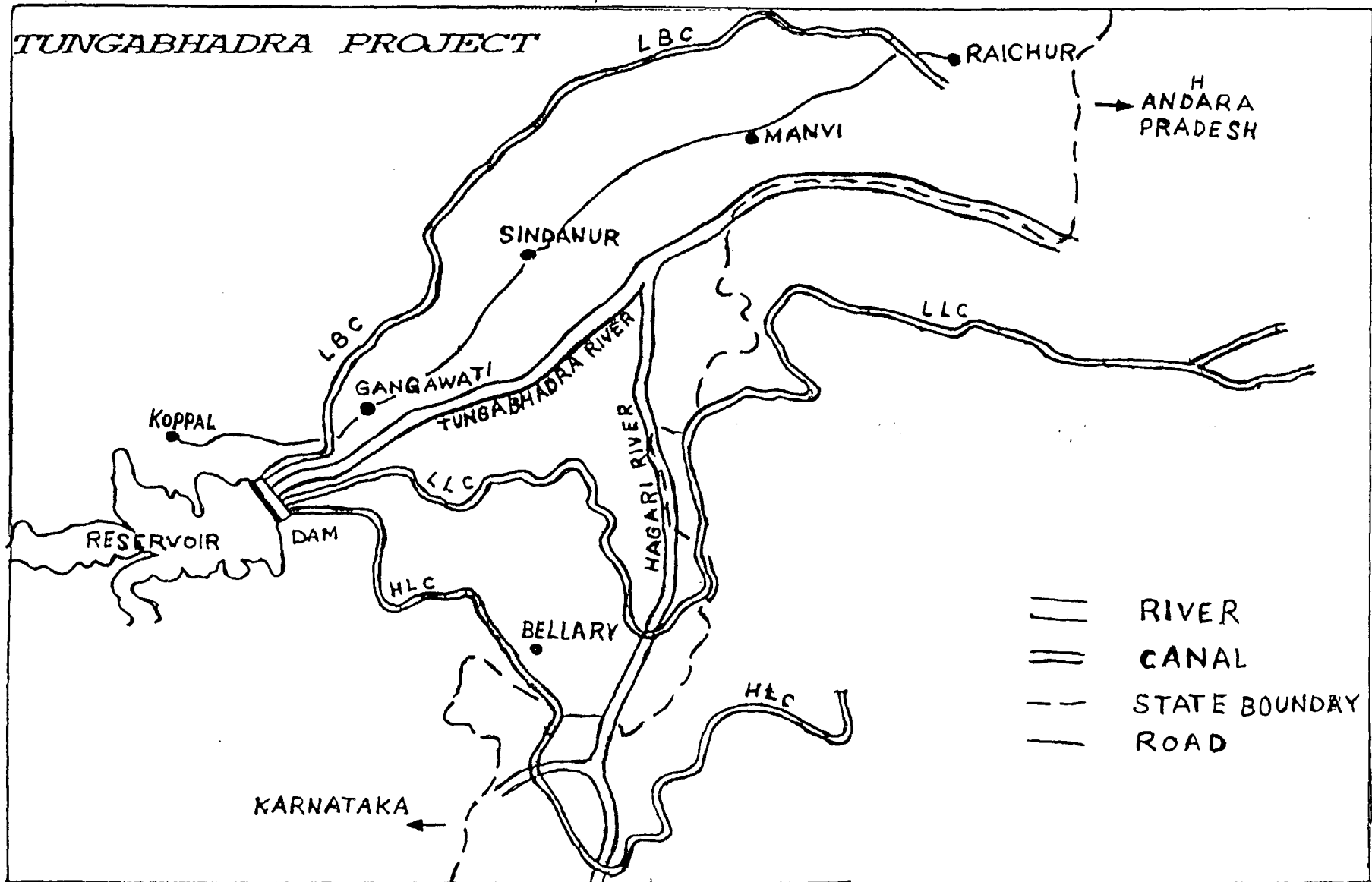
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The project was planned to cover the dry and drought prone areas of Bellary, Kurnool, Ananthapur, and Cuddapah districts on the right side, and Raichur district on the left side of the dam. The basic objective set for the project was protective rather than productive utilisation of water, meaning that water should reach the maximum possible number of villages, so that largest number of farmers are assured of water supply, by adopting less water intensive cultivation, and also eliminating in the process drinking water problem in the area.

The construction of the dam commenced in February 1945 and was completed in 1953. The project plan involved excavation of three irrigation canals, two on the right side, viz., the Low Level Canal (LLC) and the High Level Canal (HLC), both flowing into the erstwhile Madras Presidency, and on the left side, the Left Bank Canal (LBC) flowing into the Raichur district of the erstwhile Hyderabad State. After the reorganisation of the States in 1956, the entire area covered by LBC and the upper reaches of both LLC and HLC came into the then Mysore State (later Karnataka) and the rest of LLC and HLC to the present Andhra Pradesh (see Map 2).

A plan for LBC was prepared and finalised as early as in 1926 itself. However, the canal excavation started only along with the dam construction. The main canal runs for the entire length of 227 kilometers (141 miles) in the Raichur District. The gross command area of the canal is 10,80,000 acres, out of which 8,00,000 acres is cultivable command area. In conformity with the predominantly protective nature of the whole Tungabhadra Project, localisation for different crops under the canal was

MAP 2



done for as many as 6,20,699 acres out of which, 87.92 percent (Table 2.6) is set apart for the light<sup>2</sup> irrigation crops.

Table 2.6: Crop-wise Localisation Under LBC

Crops	Area in acres	Percentage
paddy	51,959	8.62
Sugarcane	20,844	3.46
light	5,29,896	87.92
all	6,02,699	100

Source: Anon, 1988.

The canal water runs through a total of 422 villages from 6 taluks. The distribution is given in Table 2.7.

Table 2.7: Taluk-wise Distribution of Localised Area

Taluk	No. of villages	Total area	Percentage
Koppal	16	6628	1.10
Gangavathi	74	83663	13.88
Sindhanur	146	221884	36.82
Manvi	128	218742	36.29
Devadurga	10	2678	0.44
Raichur	48	69104	11.47
all	422	602699	100.00

Source: Anon, 1988.

### Irrigation Expansion in the District

After an insignificant beginning, the gross irrigated area increased steadily in the 1960s and 1970s, both absolutely and relatively to cropped area, to form about 50 percent of the culturable command area and 16 percent of gross sown area (Table 2.8). It is also observed from the same table that there has

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<sup>2</sup>Light irrigation crops are those which are less water intensive, like jowar, bajra, cotton, etc, which can also be grown as dry crops. The irrigation water is intended to be used for the crops protection in cases of drought, insufficient rains or untimely rains etc.

occurred a decline in net sown area. This could be related to the expansion of irrigation itself in the following way: as we have seen, in the pre-irrigation period, there was a system of very extensive cultivation due to a high land-man ratio and low productivity of land in this district. As irrigated area expanded, there was more intensive and closer cultivation of land and a consequent contraction of the extensive margin. In fact, in most years, there is a close correspondence between the extent of decline in net sown area and extent of increase in gross irrigated area and, conversely, a decline in gross irrigated area is accompanied by an increase in net sown area (Table 2.8).

Table 2.8 : Expansion of Irrigated Area, Cropped Area and Area Sown More Than Once in Raichur District  
(Three Yearly Moving averages; area in '000 acres)

Year	GIA	GSA	% of GIA in GSA	NSA	ASMO	cropping intensity
1956-57	30.4	2646.9	1.15	2643.5	3.6	0.13
57-58	30.6	2626.0	1.16	2622.7	3.4	0.13
58-59	39.1	2637.4	1.48	2633.9	3.6	0.14
59-60	56.9	2621.9	2.17	2618.3	3.6	0.14
60-61	92.3	2620.5	3.52	2616.4	4.2	0.16
61-62	121.1	2600.3	4.66	2598.1	2.3	0.09
62-63	183.3	2637.7	6.95	2627.4	10.3	0.39
65-66	248.3	2608.6	9.52	2591.0	17.7	0.68
66-67	326.4	2595.4	12.58	2564.3	31.1	1.20
67-68	366.9	2563.1	14.31	2522.1	41.0	1.60
68-69	348.0	2584.4	13.47	2536.1	48.3	1.87
69-70	337.2	2596.2	12.99	2547.1	49.1	1.89
70-71	333.9	2592.7	12.88	2543.1	49.7	1.92
71-72	344.8	2589.2	13.32	2536.4	52.8	2.04
72-73	347.4	2573.2	13.50	2517.5	55.7	2.17
73-74	363.8	2560.9	14.20	2502.4	58.6	2.29
74-75	401.9	2567.9	15.65	2483.9	84.0	3.27
75-76	427.9	2477.3	17.28	2366.4	110.9	4.47
76-77	423.9	2424.1	17.49	2290.6	133.5	5.51
77-78	418.4	2412.8	17.34	2281.6	131.2	5.44
78-79	392.9	2521.2	15.58	2393.5	127.7	5.06

Key: GIA: Gross Irrigated Area, GSA: Gross Sown Area, NSA: Net Sown Area, ASMO: Area Sown More than Once.

Source: Indian Agriculture Statistics, Vol. II, various issues  
Statistical Abstracts of Karnataka, various issues.



## Growth of Agricultural Output

We thus find that the rate of growth of agricultural output in the post-irrigation period has been impressive both in absolute terms as well as relative to other districts in Karnataka. For example, a study by the State Government (Anon, 1988) shows that between 1960-61 and 1974-75 Raichur had registered the highest growth rate (5.4 percent per annum) of all the districts in agricultural output. And also that the increase in the district's share in the total agricultural output of the State was the highest for Raichur (see Table 2.9, last column).

Table 2.9 : Gross Value of Agricultural Output in Karnataka at 1974-75 Prices: District-wise

Districts	1960 61		1974-75		Annual expo. growth rate	Increase in the % share of the dist
	Value in Rs. crores	% age share in the state	Value in Rs. crores	% age share in the state		
Raichur	70.45	5.3	147.25	7.2	5.4	1.90
Chitradurga	58.74	4.4	116.8	5.7	5.1	1.30
Mysore	80.57	6	144.75	7.1	4.2	1.10
Shimoga	71.48	5.4	128.36	6.3	4.2	0.90
Kolar	49.69	3.7	92.93	4.5	4.6	0.80
Bellary	62.23	4.7	111.72	5.5	4.2	0.80
Bidar	29.61	2.2	55.97	2.7	4.7	0.50
Gulberga	78.62	5.9	127.88	6.2	3.5	0.30
Mandya	58.55	4.4	91.77	4.5	3.2	0.10
Chikmangalur	49.35	3.7	71.89	3.5	2.8	(0.20)
Tumkur	80.22	6	116.99	5.7	2.8	(0.30)
Bangalur	65.61	4.9	91.66	4.4	2.3	(0.50)
Bijapur	81.26	6.1	112.99	5.5	2.3	(0.60)
N.kanara	39.35	2.9	46.8	2.3	1.3	(0.60)
Coorg	49.53	3.7	61.48	3	1.6	(0.70)
Hassan	62.87	4.7	80.61	3.9	1.8	(0.80)
Dharwar	116.64	8.7	160.11	7.8	2.3	(0.90)
S.Kanara	92.46	6.9	109.57	5.4	1.3	(1.50)
Belgaum	135.89	10.2	176.06	8.6	1.9	(1.60)
State	1333.12	100.00	2044.60	100.00	3.1	-

Note: Figures in the parentheses are negative numbers.

Again according to Bhalla and Alagh (1979),<sup>3</sup> who attempted to study district-wise growth performance of Indian agriculture between 1962-65 and 1970-73, Raichur was one of the foremost districts in the State of Karnataka.

Table 2.10 : Growth of Agricultural Output and its Sources for Four Fastest Growing Districts of Karnataka

District	Exponential annual growth rate	% contribution to growth through			
		Area	Yield	Cropping Pattern	Interaction between yield & cr.patt
Chitradurga	6.91	- 9.59	98.40	12.23	1.04
Raichur	6.64	-13.51	92.11	21.07	0.33
Shimoga	5.66	12.49	78.48	12.40	-3.36
Tumkur	4.53	-56.93	123.97	28.83	4.12

Source: Bhalla and Alagh (1979).

According to this study, Raichur was the second fastest growing district in the State, with an annual exponential growth rate of 6.91 percent. In terms of the sources of growth, we find that a marginal negative contribution of area is more than compensated for by a significant contribution of yield and a positive, though small, contribution due to shift in the cropping pattern (Table 2.10).

#### Population Growth

The irrigation-led dynamism of agriculture in Raichur district was reflected in an impressive increase in population density and in the rate of growth of population, in comparison with the pre-irrigation period (Tables 2.4 and 2.11). What is to

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<sup>3</sup>The study has taken 19 important crops for its analysis and 1962-65 to 1970-73 as the study period.

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be particularly noted is that the intensively irrigated taluks like Gangavathi, Sindhanur and Manvi recorded very high rates of growth of population, compared to the State of Karnataka as a whole.

Table 2.11 : Taluk-wise Density and Percentage Changes of Population of Raichur District for Period 1951-81  
(density: persons per sq.km.)

Taluk	Densities				percentage changes			
	1951	1961	1971	1981	1951-61	1961-71	1971-81	1951-81
Devadurga	58	67	82	92	15.63	21.66	11.76	57.23
Gangavathi	65	85	134	193	30.30	57.88	43.83	195.89
Koppal	93	93	116	142	-0.22	25.22	22.21	52.70
Kustagi	72	76	93	99	5.31	21.47	6.35	36.05
Kingsugur	58	71	89	104	21.13	26.52	16.95	79.23
Manvi	54	64	81	104	18.10	26.82	28.35	92.23
Raichur	98	115	138	180	16.55	20.16	30.77	83.15
Sindhanur	46	60	86	135	28.00	44.37	56.42	189.05
Yalaburga	73	83	100	109	12.82	20.42	9.53	48.80
District	68	78	101	127	15.44	28.60	26.00	87.05
State	101	123	153	194	21.57	24.22	26.75	91.41

Source: District Census Hand Book: Raichur District, 1961, 1971, 1981.

One major point that we would emphasise here in the context of the focus of the present study is that peasant immigration into the district took place in the context of a stagnant agriculture, characterised by extensive cultivation, low productivity of land and undeveloped land and labour markets. Here, peasant immigration could not have been in response to past agricultural growth but as a response to perceived opportunities of future growth (thrown up by irrigation) and an easy availability of relatively much cheaper land in this region compared to the origin of migration (as we shall see in the next chapter).

The questions which then emerge are: How did the early phase of peasant migration get initiated and consolidated? what were the conditions at the origin of migration? How planned and organised was the process of peasant migration? What was the role of peasant migrants in the above documented process of agricultural growth and the ensuing process of commercialisation of agriculture and activation of markets? That is, whether the growth impulses got uniformly diffused among local farmers and did the migrants take a lead in this respect? In other words, what were the dynamic consequences of the interaction (through market and non-market channels) between migrant and local farmers, in the context of the economic opportunities thrown up by irrigation? Did the peasant migrants seize the economic opportunities to a greater extent than the local farmers? If so, how? These are some of the questions which will be examined in Chapters 3 and 4, mainly on the basis of our field survey data.

### Chapter 3

## INITIAL CONDITIONS OF EMERGENCE AND CONSOLIDATION OF THE PROCESS OF PEASANT MIGRATION

In South India during the nineteenth century, when canal irrigation was provided in the Kaveri, Godavari and Krishna deltas of the Madras Presidency, the local farming communities had enthusiastically taken to wet cultivation and the region registered agricultural growth and expansion. To be sure, there were some teething problems of water use and management, which the farmers had to face. But soon such problems were overcome and diffusion of irrigation technology had taken place without much delay. This process was also facilitated by two factors. Firstly, even before the advent of canal irrigation within the deltas of Tamil Nadu and coastal Andhra, whenever topography permitted, the farmers used to inundate their fields with flood water for raising crops. Secondly, even in the pre-irrigation period paddy was not a totally unknown food grain to the coastal farmers. It was raised in parts of these regions both as a wet and dry crop. True, paddy was not the predominant staple food of all classes of people. For vast sections of the delta farmers, then coarse grains formed the staple food. But when the canal systems provided irrigation water, switching over to wet paddy cultivation did not pose many problems for the farmers, as people could easily switch over to paddy as a staple food. And this had encouraged the farmers to raise wet paddy both for home consumption and the market. Hence, acceptance and adoption of irrigation as a new technology in the deltas of the Madras Presidency, was relatively smooth.

In the semi-arid tracts in the Southeastern parts of Deccan, however, diffusion of new technology and cultivation methods among the local farmers posed some problems. Till the creation of an irrigation system under the Tungabhadra dam, two features of the near stagnant agrarian economy were prominent. Firstly, as cultivation was rain-dependent, coarse grains such as jowar, bajra and ragi occupied an important place in the cropping pattern. Secondly, rice as a food item was much less known in these areas. Hence, when canal irrigation was provided from mid-1950s there was not much enthusiasm among the local farmers for wet cultivation in general and rice in particular. Lack of such an enthusiasm among the local farmers provided the right opening for the migrant farmers to come in and settle down in the Tungabhadra command areas. And they were mostly, if not wholly, from the Coastal Andhra districts of West Godavari, East Godavari, Krishna and Guntur.

Migration is a process which occurs over time. Although it starts with a trickle, over time it gains a momentum leading to a number of settlements. The purpose of this chapter is to analyse the nature of push and pull factors which initiated the process of peasant migration and the ways in which the peasant migrants went about gaining a foothold at the destination of migration. An 'anthropological' case study method is adopted to highlight the initial process of successful adaptation, consolidation and further expansion of migration flows.

## DETERMINANTS AND PATTERN OF PEASANT MIGRATION

We shall now turn to analyse the nature of the underlying conditions which initiated the process of peasant migration. For this we frame the factors of migration in 'push and pull' model. Later we also discuss some of the socio-economic characteristics of peasant migrants.

### Push Factors

Of the 50 migrant farmers of our sample, as many as 23 came from Krishna, 12 from West Godavari, 10 from East Godavari and 5 from Guntur (Table 3.1).

Table 3.1 : Distribution of Migrants by District of Origin

Origin District	No.	Percentage
Krishna	23	46
West Godavari	12	24
East Godavari	10	20
Guntur	5	10
All	50	100

Source: Village Survey.

There were several push factors which operated in the case of the Andhra migrants. They were: small size of their land holdings in the deltas, high land prices, lack of scope for non-agricultural occupations, high debts, social conflicts, crop failures etc. Among them, the first two, viz., small size of holdings and high land prices were the most important factors which influenced the decision making process of the potential migrants (Table 3.2)



Table 3.2 : Push Factors for Migration

Push factor		No.	Percentage
1.	Small land holding	50	100
2.	High land prices	50	100
3.	No scope to enter non-agricultural professions	27	54
3.	High debts at origin	17	34
4.	Social conflicts	12	24
5.	crop failures	2	4

Source: Village Survey.

By 1950s southern Coastal Andhra has had the benefit of canal irrigation for about a century (G.N.Rao, 1981, 1985). Besides the natural growth of population, the region also attracted a number of tenants and labourers from the relatively backward districts of north Coastal Andhra. The result was that there was a higher density of population, and small or average farm size brought about by fragmentation. The fact of steady decline in the per capita availability of cultivable land reflects the mounting pressure on land (Table 3.3).

Table 3.3 : Percapita Availability of Cultivable land in Coastal Andhra Districts

(acres)

year	E.Godavari	W.Godavari	Krishna	Guntur
1931	1.10	1.04	1.27	1.83
1941	1.01	0.92	1.17	1.55
1951	0.79	0.89	1.02	1.42
1961	0.60	0.66	0.70	0.86
1971	0.46	0.53	0.59	0.62

Sources: 1. Agricultural Statistics of India, Vol II, various issues.

2. Census of India.

Though by 1931 itself, the delta districts of Andhra had a low per capita availability of cultivable land, it got further reduced during the next few decades. As the pressure on land

mounted, land prices in the delta districts increased rapidly<sup>1</sup>, which rendered it difficult for the small farmers to expand their holdings. Such conditions acted as forces pushing the Coastal Andhra farmer to migrate. In Anjaneyaswamy's perception: "... farming became unremunerative because farm size was poor and low income which in turn was hardly sufficient to meet the needs of the family. There then was a chain of reactions and the farmer was caught in the milieu. In an attempt to cause a break to the circle, they choose to migrate" (Anjayeyaswamy, Op.cit.p.111). Many of them migrated to the command areas of Nizam Sagar, Nagarjuna Sagar, Kurnool-Cuddapah canal (Andhra Pradesh), Hirakud (Orissa) and Tungabhadra (Karnataka).

#### Pull Factors

According to our survey there appeared to be three pull factors in operation in the Tungabhadra command area. They were (i) lower land prices, (ii) availability of fertile and irrigated lands and (iii) co-operation extended by the pioneer migrants to the later day incumbents.

In 1950s the price of agricultural land in the Tungabhadra command area was around Rs.100 per acre, whereas in the delta-Andhra the range was between Rs.3,500 and Rs.7,000 per acre. Thus, there was ample scope for the farmers in the delta-Andhra

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<sup>1</sup>Land price ranges at different points of time, coastal AP, computed by the rates at which migrants sold their lands at origin are given below.

Year	Price (Rs./acre)
1955-60	3500 - 7000
1960-65	7000 - 15000
1965-70	15000 - 25000

to dispose of their lands and buy a large plot in the TB command area. As the pressure on land in the latter was comparatively low (from Table 3.4 and 3.4, we find that per capita availability of cultivable land was more than twice as much in Tungabhadra ayacut districts as in Coastal Andhra districts), migrants could satisfy their land hunger either by leasing in or purchasing the land.

Table 3.4 : Percapita Availability of Cultivable Land in Tungabhadra Ayacut Districts

Year	Raichur	Bellary
1951	3.76	2.31
1961	2.78	1.91
1971	2.19	1.53

Sources: 1. Agricultural Statistics of India, Vol. II, various issues.  
2. Census of India.

#### The Economic Status of the Migrant Farmers

Barring a few stray cases of large farmers and landless labour, vast majority of the migrants came from the small and middle farmer categories. In our sample of 50 migrants, only 7 were landless. Among the remaining 43 about 41 had wet lands and only two had dry lands.

An analysis of the land distribution among the 41 owners of wet lands is given in Table 3.5. Whereas about 31 percent of the migrants had land holdings not exceeding one acre, holdings well over 60 percent of the migrants in our sample did not cross two acres. Thus the bulk of the migrants were small and middle farmers. The landless migrants were essentially labourers sponsored by the few rich farmer-migrants who wished to have some skilled labourers in wet cultivation.

Table 3.5 : Land Distribution of Wet Land Holders at Origin

Class Interval (in acres)	No. of farmers	Cumulative percentage
0 - 1	14	31.15
1.1 - 2	11	60.97
2.1 - 3	8	80.48
3.1 - 4	4	90.24
4.1 - 5	3	97.56
5.1 - 6	-	97.56
6.1 - 7	1	100

Source : Village Survey.

After land, the other important assets that the migrants had at the place of origin were houses. Most of the migrants sold their houses along with the land so as to buy land in the Tungabhadra command area. On average per migrant capital flow into the Tungabhadra command area was about Rs.24,140, and about 50 percent of the sample migrants had come with Rs.25,000 or more (Table 3.6).

Table 3.6 : Distribution of Sample Migrants by Range of Initial Capital Inflow from Origin to Destination

Class Interval (Rs.)	Farmers	Cumulative %
0 - 5000	11	22
5000 - 25000	16	54
25000 - 50000	17	88
50000 - above	6	100

Source : Village Survey.

#### Caste Composition of the Migrants

An interesting sociological aspect of migration is that well over three-fourths of the migrants (38 out of 50) in the sample came from a single peasant caste, viz., Kammas. The next in order (8 out of 50) are the Rajus.

Kammas, in general, are the most dynamic and enterprising peasant community of Andhra. Historically they had always been quick to spot any opening for cultivation in other places and out migrate. Even in the case of the Tungabhadra command area, it was the Kammas who formed a sizeable chunk of the Andhra immigrants in the Bellary and Raichur districts of Karnataka.

## INITIAL PROBLEMS, ADAPTATION AND CONSOLIDATION OF MIGRANT FARMERS IN RAICHUR DISTRICT

### Emergence

The railway bridge across the Tungabhadra river at Munirabad near Hospet was the only entry point into Karnataka for the prospective migrant farmers from Andhra. The pioneer migrant farmers from Coastal Andhra came into the Tungabhadra command area via the Guntakal - Gadag railway line. Having entered into Karnataka, they had to alight at the Ginigeri station which was nearest to the head reaches of the Left Bank Canal (LBC).

The earliest settlements of the migrants in the area were set up at Basavapatnam and Waddrahatti, both in the head reaches of LBC. As the news about the fresh opportunities available for potential migrants spread in Coastal Andhra, the flow of migrants into the command area of the irrigation system got intensified. Setting off from Waddrahatti and Basavapatnam, the migrants spread slowly into the interior areas such as Marali, Hebbala, Gundur, Danapur, Siddapur and other places in the Gangavathi taluk of the district. By late 1970s they spread to the Sindhanur and Manvi taluks, thus covering almost the entire ayacut area.

The migrants used to go round the ayacut area surveying lands and suitable areas for habitation. When one or two pioneer migrants had already set up their establishments in the ayacut area, they became the information centers and sources of help for the new migrants. The host-migrants would render all help to the fresh migrants to settle down in the area. Often the former also used to accompany the latter as members of the exploratory or scouting teams going along the canals and distributaries looking for cultivable lands. Armed with the information obtained from the Tungabhadra Project engineers and the localisation maps, the migrant teams would set off exploring the ayacut area. After identifying suitable lands, they would talk to the villagers, Kulkarnies (village accountants) and negotiate either the terms of land-lease or sale-deal. Often the early migrants acted as middlemen in the land transactions between the villagers and the fresh migrant farmers.

In the early stages of migration, when best tracks of fertile lands were available, the fresh migrants had an option to choose the best lands at the most convenient places. The lands chosen must satisfy two conditions: firstly, they must lie within the vicinity of the main canal/distributary, and secondly, the locality should be endowed with good transport facility or at least be nearer to such a place. The first condition assured them of irrigation water and the latter ensured a link with a nearby town or a migrant-camp.

#### Initial Problems

The command area of Tungabhadra project is spread in as many as four districts of the two states of Karnataka and Andhra

Pradesh. Being vast in extent it was heterogeneous in terms of soil, water availability and so on. When a migrant reached such a vast tract, he was understandably faced with the problem of choosing his farm land and site for his stay. His first choice might not be the best one available. Thus, there was always scope for intra-village shifts or step-migration within the command area. Like fresh migration, step-migration also spread from head to the tail reaches of the canal. The principles governing the step migration were (a) nearness to the field (b) nearness to the canal and (c) nearness to the road. Also step migrants from a particular camp had a tendency to flock to a common destination and establish a camp for themselves. The main driving force for step-migration is the difference in the land values between the existing settlement and the place of potential step-migration. With a rise in the density of migrants at the early settlements i.e., the head reaches, demand for land went up leading to a rise in land values. And, in the absence of such factors, land values remained at a low level in the lower reaches of the command area.

The pioneer migrants in the TB command area faced severe hardships in the early phase. They led a completely isolated and lonely life till fresh migrants joined them. Having settled in a totally new socio-cultural environment, they could hardly interact with the new people. Besides this socio-cultural problem, at the level of cultivation the migrant farmers faced some problems.

As stated in the earlier chapter, the incidence of agricultural labour was generally low in the Raichur district. Among the intermediate peasant castes, wage labour was

traditionally looked upon as a social taboo. As for the Harijans who formed the bulk of landless agricultural labour, a majority of them were in the grip of the local landlords. Besides the fact that the local labour was in short supply, in the initial stages they were also ill-equipped to carry out the operations of wet cultivation which were quite new to them. Under these circumstances, as wage-labour was in short supply, the migrant farmers had to carry on farming with the family labour. The inadequacy of the family labour became a constraint on the expansion of operational holdings.

To overcome the problem of labour shortage, the migrant farmers had to offer higher wages. This helped them to mobilise labour to some extent both from within the villages as also from outside. Occasionally, migrant farmers with large holdings could successfully recruit labourers from across the border in the Andhra State. Some migrant farmers brought labourers from their native places in Coastal Andhra.

At the level of fields there were some physical problems which the migrant farmers faced in converting the dry lands into wet. The bunds laid down for demarcating the plots often breached, necessitating the repetition of these activities and extra labour costs. A control on water inlet as well as drainage could not be obtained by the migrants as they were unfamiliar with the nature of the soil. As chemical fertilisers were not available in the area, migrants had to apply organic manures like cow-dung, pig-dung, green manures such as 'Jilledu' plants etc. Many a time, as bunds breached, these manures would get washed away. Application of manures to the fields more than once again meant extra costs. The migrants made efforts to overcome these



problems by planting a special type of grass on field bunds and strengthen them. Also inlet and drainage valves were strengthened and special drainage pipes were installed to obtain greater control over the flow of water. Thus for the migrant farmers from Coastal Andhra it was not a straight forward adoption of the practices of wet cultivation which they were accustomed to in Andhra. They had to overcome some specific problems both in terms of mobilisation of labour and production organisation.

### Step Migration

There was a definite pattern in the emergence of migrant-camps. This is clear from a look at the Sriramnagar and other migrant-camps (see Map 1). Sriramnagar was one of the earliest camps which emerged in 1957. It was set up at the crossing of the 25th distributary of the LBC and the road connecting Sindhanur and Gangavathi. As Sriramnagar developed into a big camp with an assured marketing and transport facilities, a few satellite camps had also emerged around it. These camps developed only along the main distributary on either side of the Sriramnagar camp, connecting each other with metal roads. Some of the important camps among them are Mudilla camp, Kotaiah camp, to the west and Hebbala camp, Amjur, Mustoor, Gundur, Danapur camps to the east. These exclude quite many isolated farms houses on either side. For all these camps and farms houses Sriramnagar continues to be the main and immediate centre of economic activities. So far we have discussed some general features of migration and the problems that the Andhra migrants faced in adapting themselves to the new environment in the

Raichur district. In what follows an account is given of the growth of a typical migrant's camp representing the process of consolidation of peasant migrants.

#### The Sriramnagar Camp

In the pre-irrigation period the area under what was later to become Sriramnagar was dry and deserted, with little vegetation around. A pioneer migrant farmer Pala Manikyam erected the first ever hut in that area in 1957. He chose a site at the junction of the mettle road connecting Gangavathi and Sindhanur and the 25th distributary of the LBC. Young Manikyam was highly enterprising. He came to the area with only a small amount of capital. To start with he leased in land. With a pair of hired bullocks and agricultural implements borrowed from the local farmers he set out to cultivate the leased-in land. He led a lonely and adventurous life for an year when another migrant farmer, Tatalu Chowdari joined him.

Although Manikyam was the founder of Sriramnagar, it was Tatalu who built the camp. Like Manikyam, Tatalu was also an enterprising and adventurous man. Before he settled down in Sriramnagar, he spent many years in Rangoon. He was supposed to have returned from Rangoon with quite many 'silver coins'. One of his friends working at Ginigeri as a Railway station master informed Tatalu about the good prospects of farming in the Tungabhadra command area. In 1958 Tatalu set up his hut near Manikyam's.

Manikyam who started as a humble tenant went on increasing his landed aspects whereas Tatalu who began farming with not so small a capital kept himself busy with building up the later day

Sriramnagar, the migrants' camp. He made special efforts in inducing the potential migrants from Coastal Andhra to immigrate into Sriramnagar. Most of these migrants were small and marginal farmers. He stood as a referee in all transactions in land between the local sellers and migrant buyers. In most of the cases Tatalu advanced credit to fresh migrants. Sometimes he used to buy lands from the locals and resell them to the migrant farmers. He had also initiated a well planned lay out for the house sites in the migrants' camp. In fact he had made house plots from one of his farms and allotted them to the needy migrants. Besides he also brought washermen, barbers, carpenters and priest-cum-teachers to the emerging village.

Tatalu's son Sri Rama Murthy was also an enterprising man interested in building up the village. For the increasing flow of migrant farmers the first problem facing them was housing and the availability of the housing material such as bamboo. Sri Rama Murthy took up the business of bamboo supply to the migrants. The services of the Tatalu family in building up the village was well acknowledged by the villagers by erecting a 'Rama Mandiram' (Temple of Rama) in the memory of Tatalu Chowdari.

The 'Camp' inhabited by the Telugu migrant farmers was originally called 'Hebbala Camp', Hebbala being the closest village inhabited by the locals. Later, when B.V.Desai, a member of a powerful Desai family, became politically and economically powerful in the village, 'Hebbala Camp' was renamed as 'Desai Camp'. In 1973, 'Desai Camp' was registered as 'Sriramnagar'. As Sriramulu, one of the migrants became a prominent member in

the village, the village acquired the new name 'Sriramnagar', which continues till today.

At present Sriramnagar is one of the prominent villages in the area, with a population well over seven thousand (according to the 1981 census the population of Sriramnagar was 6873). Presently the village has a post and telegraph office (one of the five in the entire Gangavathi taluk), two primary schools, a secondary school, six private clinics, two cinema theatres, both owned and run by the Manikyam family. Sriramnagar attracts traders from both Andhra and Karnataka. The weekly market (on Thursdays), is popular throughout the taluk. Similarly, in the weekly cattle market of the village, between four to five thousand heads of cattle are sold and purchased. Cattle owners from Tamil Nadu, Andhra and Karnataka bring their stock for sale in Sriramnagar. The village can also boast of a market in food grains especially rice.

The following inferences may be drawn from the analysis in this chapter. There was apparently simultaneous operation of push and pull factors in the sense that uneconomic holdings at origin and perceived economic opportunities at the point of destination together prompted migration. But, at the same time, the peasant migrants were essentially guided by considerations of expansion of area and improvement of income, the prospects of which were bright due to relatively very low price of land and coming of irrigation at the point of destination. Thus, peasant migration in this case was clearly not a survival strategy, unlike labour migration. In this sense, peasant migration was quite attractive and hence it was that the pull factors were of greater importance than push factors.

Given such a conscious and relatively voluntary decision to migrate, it is not surprising to find that peasant migrants went about systematically in gaining a food-hold at the destination of migration, mainly through enterprise, personal and often joint efforts, and the necessary investments in the purchase and development of land (as we shall see in greater detail in the next chapter). All this essentially went towards acquiring an appropriate land-base and an adequate knowledge of local agro-climatic conditions. In particular, the collective efforts by the migrants as a homogeneous group seem to have facilitated adaptation to the new surroundings without much direct assistance from the locals or other middlemen. In the next chapter, we shall analyse how the economic opportunities thrown up by irrigation were seized by immigrant farmers through both market and non-market mechanisms.

## Chapter 4

### PEASANT MIGRANTS, LOCAL FARMERS AND AGRARIAN CHANGE

Agrarian Change, in the present study, is conceptualised in terms of the growth of agrarian markets - in land, labour and credit. This is because in a subsistent and stagnant agrarian scenario, growth agents such as peasant entrepreneurs, new technology, novel cultivation practices and new crops etc., tend to activate these markets. However, only rarely does there occur a synchronic development of all the four markets. Thus, in the developing countries an uneven development of these markets which is often the case, slows down the advent of a full fledged process of commercialisation in agriculture. In any case, any change which is perceptible would have to be seen via these markets. The purpose of this chapter is as follows: (i) to document, to the extent the available data permit, the evolution of these markets in the Raichur district in general and the study area in particular, (ii) examine the nature and extent of involvement of the local and migrant farmers in the land, labour and credit markets, (iii) the cropping pattern choice of migrant and local farmers, (iv) the pattern of use and access to irrigation water, which is the source of dynamism, as well as the most scarce resource in this region and finally (v) assess the relative economic condition and standards of living (as reflected in the asset holdings including housing conditions as well as in educational status) of the two groups of farmers as a consequence of their participation in a dynamic agrarian economy.

## LAND MARKET

Before the advent of canal irrigation, the land market in Hebbala was quite inactive. Land prices were low, about Rs.50 per acre. The demand for land was almost non-existent due to low density of population, high land-man ratio, rain-dependent and subsistence nature of cultivation.

In the post-irrigation period, as a result of assured water supply, cultivation no longer remained unattractive to an enterprising farmer. The massive influx of migrant farmers into the region in search of farm land led to a rise in land value. In the initial phase when there was an intense demand for land from the migrants, the locals responded positively. Later, as their land holding sizes declined, they restrained from selling away their lands. This had in turn activated the lease market for land. However, in the land transactions which followed irrigation and migration, the locals lost much of their lands to migrants so much so that in terms of ownership, their position vis-a-vis the migrants became marginalised. In this section we try to document and analyse some select aspects of land market in the Hebbala village.

According to the qualitative information gathered in the course of our survey, in the immediate post-irrigation period, the local farmers were surprised by the migrants' offer to buy their lands at Rs.100 per acre - a rate which was double the ruling market price. The pioneer migrant farmer Tatalu Chowdari purchased about 100 acres at that rate. This induced many of the Kannada farmers to look for the 'Reddies', the name they gave to the Telugu migrant farmers. Many local farmers used to go round the isolated farm houses of the migrants offering them their

lands for sale. Some of the locals had even sold their lands to the migrants for deferred payments. A successful persuasion/sale by the locals was often used to call for a celebration. There were significant transactions of land in our study area after the coming of irrigation. Though the area sold per sale gradually declined, there was a steady rise in the price of land (Table 4.1).

Table 4.1 : Land Transactions in Hebbala, Select Years

Year	No. of sales	Area (acres)	Area per sale	Avg. price (Rs./acre)
1957-58	4	81	20.25	113.26
58-59	7	119.06	17.01	203.06
59-60	18	230.59	12.81	298.82
60-61	16	195.87	12.28	374.67
61-62	38	424.77	11.18	391.75
62-63	26	292.79	11.26	608.85
63-64	29	284.02	9.79	916.33
66-67	63	220.66	3.5	1502.98
h75-76	39	92.31	2.37	7621.19
s80-81	17	24.5	1.44	10222.07
s85-86	14	16.01	1.14	27503.48

Note: Data could not be collected for all the years due to limited access to official records.

h : Data relating to only Hebbala.

s : Data relating to only Sriramnagar.

Source : Sub-Registrar's Office of Land Transactions, Gangavathi.

Although information available in Table 4.2 is partial it does give some idea on the land transfers from the locals to the migrants. In all the transactions migrants stood as net gainers of land (Table 4.2).



Table 4.2 : Percentage Distribution of Total Land Sold and Total Land Purchased Between Locals and migrants

Year	% of total land transacted by				Net acc- ruals to migrants (acres)	Total la- nd trans- acted (acres)
	Locals		Migrants			
	Sales	Purch- ases	Sales	Purch- ases		
1957-58	100.00	-	-	100.00	81.00	81.00
58-59	83.03	18.05	16.97	81.95	77.37	119.06
59-60	100.00	14.74	-	85.26	196.60	230.59
60-61	85.26	-	14.74	100.00	166.99	195.87
61-62	91.77	20.95	8.23	19.05	300.82	424.77
62-63	63.49	37.56	36.51	62.44	75.92	393.79
63-64	77.29	19.85	22.71	80.15	136.14	284.02
66-67	79.77	19.39	20.23	80.31	132.57	220.66
h75-56	63.38	34.50	36.62	66.50	26.65	92.31
s80-81	56.48	6.12	43.52	95.88	12.34	24.50
s85-86	15.57	6.24	84.43	95.76	1.49	16.01

Note: Total land transacted = Total land sold (by locals and migrants) = Total land purchased (by locals and migrants).  
Source : Same as earlier table.

We have investigated the land holding positions of 50 local (Kannadiga) farmers of Hebbala during the post-irrigation period. In 1957, around when the migration started, the respondents' households owned about 1045 acres. Of this land about 455 acres or a little over 43 percent was sold by them in the ensuing three decades (Table 4.3).

Table 4.3 : Land Distribution of First Generation of Locals, Their Sales - Size Class wise

Size Class (acres)	No. of holdings	Land held	No. of sales	Land sold	% of land sold to total	Rest of the holding
Small (< 5)	-	-	-	-	-	-
Medium (5-12.5)	18	155	6	38	24.51	117
Large (> 12.5)	32	890	33	417	46.85	473
all	50	1045	39	455	43.54	590

Source : Village Survey.

There were four reasons why the local farmers sold off their lands to the migrants: (i) large size of land holdings, (ii) farm lands being located at a distance far away from home (iii) redemption of debt and (iv) immediate accrual of cash.

Table 4.4 : Reasons for Land Sales by the First Generation of Locals

Reasons for sale	No.	Percentage
Immediate income	23	58.97
Large holding	21	53.84
Far off from home	16	41.03
Redemption of debt	6	15.38

Source : Village Survey

It is to be noted that the reasons for land sales are not mutually exclusive. With a big push given by the migrants to the land values, the temptation of immediate accrual of cash and the problems the big farmers faced in cultivating lands located far away from their homes were the major reasons for earlier generation of the locals to sell their lands to the migrants. Quite many big land holders of the village were also said to have had a taste for luxurious living, which required ready cash. Wherever the migrants leased in lands for cultivation, he often used to extend credit to his landlord for meeting the expenses towards festivals and ceremonies. Sometimes, the migrant-tenant would induce his landlord to continue to borrow money from him. Advancing credit to the landlord appeared to be a gesture of sincere friendship, but care was, however, taken to see that the loan was always kept outstanding, either by advancing fresh loans or by non-collection of the principal amount. When the loan amount became large the local farmer had no other alternative but to surrender his land to the migrant farmer.

So far the discussion is restricted to the 'first generation' of locals i.e., locals of the immediate post-irrigation period. The next generation of the locals who inherited about 590 acres also sold some of their lands. After loosing land in the family partitions, the second generation of the local (sample) farmers inherited about 373.5 acres of which they sold 154 acres and purchased 13.5 acres. That is, the net transactions of lands away from the 'Second generation' of the locals was about 140.5 acres (Table 4.5).

Table 4.5 : Land Transactions by Second Generation of Locals

	Wet	Dry	Total
Inherited	299.0	74.5	373.5
sold	124.5	29.5	154.0
Purchased	7.5	6.0	13.5
Present holding	182.0	51.0	233.0

Source: Village Survey.

Of the 140.5 acres sold, 124.5 acres was wet and 29.5 acres dry. Whereas 26.5 acres of land (all dry) was sold to the locals the rest was sold to the migrant farmers (Table 4.6).

Table 4.6 : Land Sold and Purchased by Second Generation

Type of land	Sold to		Purchased from	
	Locals	Migrants	Locals	Migrants
Wet	-	124.5	6.5	1
Dry	26.5	3.0	6.0	-
Total	26.5	127.5	12.5	1

Source : Village Survey

As for the reasons for land sales by the 'second generation' of locals, unavoidable expenses and redemption of debts account for nearly two-thirds of the sales (Table 4.7).

**Table 4.7 : Reasons for land sales by the  
Second Generation of Locals**

Reasons for sale	No.	Percentage
Large holding	3	8.11
Far off from home	4	10.81
Redemption of debt	11	29.73
Immediate income	6	16.21
Unavoidable expenses	13	35.14

Source : Village Survey.

Of a sample of 50 migrants in village Sriramnagar, 19 are elders who came 30 years ago. In a way they are the 'original' migrants. The rest of the 31 respondents belonged to the 'second generation' of migrants who inherited the land. Let us analyse the land transactions of these migrant-respondents (Table 4.8).

**Table 4.8 : Land Transactions among the Migrant Farmers  
(Area in acres)**

	Wet	Dry	Total
Inherited	207.25	20.5	227.75
Purchased	348.50	56.5	405.0
Sold	39.00	-	39.0
Present holding	516.75	77.0	593.75

Source : Village Survey.

As Table 4.8 shows, migrants' predominant interest lay in acquiring wet land. Of the 593 acres of land that they own, as many as 516 acres are under wet cultivation.

An interesting feature of the migrants' land transactions is that land transfers are purely one-sided i.e., from the locals to the migrants. This is clear from Table 4.9.

**Table 4.9 : Land Sold and Purchased By Migrants**

Type of land	Purchased from		Sold to	
	Locals	Migrants	Locals	Migrants
Wet	239.5	150.5	-	39
Dry	41.5	15.0	-	-
Total	239.5	165.5	-	39

Source: Village Survey.

Present Structure of Land Ownership

Table 4.10 gives information on the current status of land holdings among 100 farmers - sample of 50 migrants and 50 locals. Total land owned by these migrants is about 593.75 acres. The 50 local respondents of our sample own about 233 acres.

**Table 4.10 : Distribution of Land Holdings: Migrants and Locals**

Size Class (in acres)	Migrants		Locals	
	No.	Area	No.	Area
Small ( < 5)	15	57 (9.61)	28	71 (30.47)
Medium (5 - 12.5)	23	253 (42.61)	20	134 (57.51)
Large ( > 12.5)	12	283.75 (47.78)	2	28 (12.02)
Total	50	593.75 (100.00)	50	233 (100.00)

Note: figures in parentheses refer to percentages.  
Source: Village Survey.

Of the 593.75 acres of land with the migrants, as much as 516.75 acres is of the wet category and thus only 77 acres of the migrants' lands are dry. Of the Locals' lands of 233 acres, 182 acres are wet and 51 acres dry. About 48 percent of migrants own large holdings accounting for nearly 48 percent of total land owned by this group whereas more than 50 percent of local farmers

own small holdings accounting for 30 percent of total land owned. As a result, the average size of owned land is about 12 acres for migrants and only less than five acres for locals (Table 4.10).

#### Lease Market

As noted earlier, during the last three decades of the post-irrigation period the land sales to the migrants reduced the average size of the local farmer's holdings. Hence, the latter became wary of any more land sales. Instead, they started leasing out their lands to the migrants. Even small farmers preferred to do so. For the feeling amongst the local farmers was that some times the rental that accrues to them is more than the farm income if the small farmer were to cultivate the plot himself. It is also felt that the land rentals from the migrants are riskless and assured. On the other hand, self-cultivation always involves risk, which the small farmers, not confident of handling wet cultivation, would try to avoid. This is, however not to suggest that leasing out lands to migrants became the predominant phenomenon. A majority of the local farming families having now reduced sizes of landholding compared to the earlier times, do cultivate their plots themselves. For instance, in our sample of 50 local farmers, only 19 leased out their lands, though as much as 61.5 percent of their owned land. As many as 12 out of the 19 are small farmers, leasing out greater proportion of their land. Interestingly, three local farmers were noted to have leased in about 9 acres land for cultivation (Table 4.11).

Table 4.11 : Lands Leased out by the local farmers

Size Class of owned land (acres)	No. of farmers	Owned land	Area leased out	(4) as % of (3)
(1)	(2)	(3)	(3)	(5)
Small (< 5)	12	39	28	71.7
Marginal (5 - 12.5)	5	49	16	32.6
Large (> 12.5)	2	52	20	38.4
All	19	140	64	61.5

Source: Village Survey.

In our sample of 50 migrant farmers, 20 have leased in land. It is interesting to note that eight of them are large land holders. Leased in land formed about 36.7 percent of the operated land of the eight migrant-tenants (Table 4.12).

Table 4.12 : Land leased in by the Migrants

Size Class operational holding (acres)	No of farmers	Operational holding	Area Leased in	(4) as % of (3)
(1)	(2)	(3)	(4)	(5)
Small (< 5)	-	-	-	-
Marginal (5 - 12.5)	1	118.5	46.5	39.24
Large (12.5 >)	8	215.0	76.0	35.34
All	20	333.5	122.5	36.73

Source: Village Survey.

To sum up the discussion, land market got activated in the post-irrigation and post-migration period. Land ownership over the years tilted in favour of the migrants. In the recent times

sections of the locals started leasing out their lands instead of selling them away. Presently, average size of the migrants' land holding is much larger than that of the local farmers. The migrants hardly sell their lands, and even if occasionally they do, it is to the fellow migrants. In the lease market, it is migrants who by and large lease in land for cultivation.

### LABOUR MARKET

In this section an attempt is made to trace the changes brought about in the labour market in the post-irrigation period. Since information at the village level is hard to come by, we undertake a taluk level analysis of data on agricultural labour. We argue that in a post-irrigation scenario, not only the labour requirements normally go up but the very nature of the labour market, in terms of recruitment, wage-payment etc., would change. We find that in the village surveyed such changes had occurred in the labour market.

Misra and Vivekanand (1979), in their study on the impact of Tungabhadra irrigation on select villages of Bellary district argued that demand for hired labour in the perennially irrigated lands - like the command area under TB-LBC - had increased from 10 man days to 105 man days per acre per year, a rise of 950 percent.

At the same time the annual employment per head is said to have increased from 131 days before irrigation to 228 days after the introduction of irrigation. This is a rise of 74 percent. If we contrast the rise in hired labour per acre (950 percent) and the rise in annual employment per head (74 percent) the former is far larger than the latter. This implies that there



had been a big rise in the absolute number of labourers, which seems to have been a result of large scale labour immigration into the area. This seems to be partly reflected in aggregative data on the relative rate of growth in the number of agricultural labourers in Raichur district (Table 4.13).

**Table 4.13 : Percentage Change in Population and Agricultural Labour, 1961-81**

Taluk	1961-71		1971-81		1961-81	
	Popn.	Agr. Lab	Popn.	Agr. Lab	Popn.	Agr. Lab
Devadurga	21.66	161.25	11.76	18.19	35.97	208.79
Gangavathi	57.88	166.63	43.83	71.11	127.09	356.40
Koppal	25.22	61.21	22.21	55.40	53.04	150.52
Kustagi	21.47	69.08	6.35	28.79	29.18	117.25
Lingsugur	26.52	65.48	16.95	54.50	47.97	155.68
Manvi	26.82	52.59	28.35	77.05	62.77	170.16
Raichur	20.16	25.16	20.77	58.68	57.14	98.60
Sindhanur	44.37	137.10	56.42	164.06	125.83	562.07
Yalaburga	20.42	94.72	9.53	17.95	31.89	129.51
District	28.59	84.35	26.00	63.08	62.03	200.64

Source: District Census Hand Book, Raichur, 1961, 1971, 1981.

During the two decades ending with 1981, in the Raichur district, whereas population rose by 62 percent, agricultural labour increased by as much as 200 percent. The increase in agricultural labour was faster in the irrigated taluks such as Gangavathi and Sindhanur. Even at the level of district the increase in agricultural labour in the two decades (200 percent) was quite sharp. This rise should be attributed to agrarian dynamism in general and the new input of irrigation in particular. However, in the context of a passive response which irrigation initially received from the local farmers, it should be interesting to know the method by which the labour supply was sought to be augmented mainly by the migrant farmers.

As noted earlier, by and large, it was the migrants who initiated wet cultivation in the region. When the migrants first started wet cultivation in the area, the general shortage of labour was a serious problem they faced. The pioneer migrants could undertake cultivation of not more than one or two acres to start with, for they had to depend entirely on their family labour. To expand cultivation, they needed additional labour power. The first source for them was the traditional lower caste agricultural labour of the nearby Kannada villages. Other poorer classes were reluctant to work as agricultural labourers. For migrants, even mobilising the traditional workers was a difficult task, for in the then social milieu, working for others had invited the ire of their upper caste landlords. However, by raising the wage rates from 8 annas (50 paise) to 12 annas (75 paise) the migrants could induce some agricultural labourers to work for them. But the available labour supply was far from sufficient besides being unskilled in wet cultivation. The dire necessity of labour led migrants to look for other sources. They went around the villages of the surrounding dry taluks such as Kustagi, Lingsugur, Koppal and successfully won over the Kannada labourers with offer of higher wages. Migrants also visited dry taluks of Andhra Pradesh such as Adoni, Alur, etc. Agricultural Labourers from Gadwal taluk of Mahaboob Nagar district, are commonly found in most of the Telugu camps. Migrants prefer Gadwal labourers the most because of their hard working and honest nature. In the beginning some of the migrant farmers had brought agricultural labourers also from Coastal Andhra to work in their fields.

Another source of agricultural labour was the local cultivators who turned agricultural labourers. After losing their lands, many locals were reduced to a status of agricultural labourers. This happened at times by voluntary sales and at others by distress and/or forced sales. It is quite common that migrants in many cases alienated local cultivators from their lands in a shrewd way. Many small and marginal migrants, who could not afford to purchase lands right away, first leased in land from the Kannada farmers. The owner joined the agricultural labour class to work on his own land for wage, besides getting his rent. Later, as explained earlier migrant purposefully triggered his landlord in a debt trap. As debt burden gradually increased, the local farmer surrendered his holding and permanently became agricultural labourer.

The preceding discussion broadly suggests the process of rise of agricultural labour supply in the region, which was mainly carried out by migrant farmers. In short, there were two major sources of agricultural labour. Firstly, labourers were mobilised from the surrounding dry villages as well as from distant parts of Andhra Pradesh and Karnataka. And secondly, labourers came from depeasantised section of the local farmers.

For a further understanding of role of migrants in activating labour market, we can look at the labour employment of migrants and the locals. In our case study, 25 out of 50 migrants are employing regular labourers, while none of the local cultivators reported having hired any regular labourers. However, regular labour is not the only labour employed by the cultivators. Other forms of labour are, 'contractual labour' and

'seasonal labour', who in fact are more in number than the regular labourers. But the employment of those labourers by the farmers depends on the extent of their cultivation, the season in question and the crops raised. Here, let us have a brief discussion on the nature of labour market.

### Nature of Labour Market

We can broadly divide the labour market into two types: (i) Settled Labour Market and (ii) seasonal Labour Market.

(i) Settled labour market: Settled labourers are those who are more or less permanently settled in the village as against seasonal labour. At the time of the survey, Sriramnagar had more than 3500 settled labourers of different sorts, the majority being agricultural labourers<sup>1</sup>. Other than agricultural labourers there are market labourers (Hamalies) cart drivers, sugarcane factory labourers, etc. Among the agricultural labour, casual daily labour, in strict sense of the term, is rare although not completely absent. There are two types of settled labourers: (a) Contractual Labour and (b) Regular labour. Contractual labour is a new form of labour. Contractual labour is one that has evolved for reasons of convenience and efficiency. Here, a group of workers - the number varies between 5 to 25 or more - calling themselves a 'Mutha' or 'Banta' work together usually with a leader, but on a few occasions without one. The Muthas or Bantas take up any work like harvesting, transplanting, weeding or

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<sup>1</sup>The pioneer migrants Tatalu Chowdary and his son Sri Ramamurthy have planned and built up a separate colony for the agricultural labourers, now called as 'Sri Raghavendra Colony'.

Sugarcane cutting on a per acre basis, irrespective of how many labourers actually do the work. Later the payment would be divided equally among all the workers, the leader at times getting double the amount as his share.

Regular labourer, on the other hand, is an agricultural labourer who generally works for a single farmer, for a long time. In our survey, as already noted, among the respondent migrants (50), only 25 are seen to be employing regular labourers; none of the local cultivators employed any. From this it appears that employment of regular labour is not much preferred by the cultivators, for fear of problems usually associated with it. The regular workers employed can be classified into three categories based upon the type of payment of wages (weekly, monthly, and yearly) as in Table 4.14.

Table 4.14 : Types of Payment, Number of Employers and Workers #

Type of payment	No. of workers	No. of employers
Weekly	33	14
Monthly	11	5
Yearly	11	6
Total	55	25

Source: Village Survey.

The significance of the distinction of labourers based on type of payment lies in the nature of appointment and the prospective time they remain in the work and also the type of work they are put to. To elucidate further, the labourers on an yearly payment is one who is more or less permanently employed and trusted. At the other extreme, weekly-paid labourer is generally employed for a seasons's work. In the peak season like

harvesting farmers need some regular labourers. After the season, generally they are fired. The monthly labourers fall between these two categories.

Let us turn to the type of work that the regular labourers are put to. For convenience, we classified the data collected into three mutually exclusive groups: 1. Agriculture work, which includes all kinds of work on the field. 2. House hold and cattle work, which includes work of house maintenance and looking after cattle and 3. miscellaneous work which includes cart and tractor driving, watchman, both in the farm and house etc. Table 4.15 gives the distribution of the workers according to the work.

Table 4.15 : Distribution of Labourers According to the Nature of Work and Type of Payment

Type of payment	Agriculture work	House and cattle	Miscellaneous
Weekly	14	10	9
Monthly	4	3	4
Yearly	4	4	3
Total	22	17	16

Source: Village Survey.

The overall inference that may be drawn is that only 50 % of the migrant peasants are employing regular agricultural labourers, of whom a majority are seasonally employed getting weekly payment.

Now let us look at the remuneration of the regular workers. The weighted average money wage rates for the three types of labourers are found to be as below.

Table 4.16 : Type of Payment and Wage Rates

Type of payment	Weighted* average wage rate	Per day wage rate
Weekly	72.74	10.39
Monthly	327.27	10.91
Yearly	2920.73	8.012

\* Weights are the number of workers in each type of work

Source: Village Survey.

The per diem money wage rates show interesting variation across the type of payment. Annual wage labourers get the lowest (8.01) wage rate per day. The monthly wage labourers get a marginally higher than weekly labourers

The regular labourers are generally favoured some benefits besides money wages, which can be broadly classified as food, housing and clothing. In our sample, such perquisites are also distributed to the labourers (Table 4.17).

Table 4.17 : Distribution of Labourers According to the Type of Payment and Type of Benefit

Benefit awarded	Weekly	Monthly	Yearly	Total
Food	13	6	10	29
Clothing	19	6	11	36
Housing	1	5	5	11

Source: Village Survey.

We see that in total (last column of the table) food and clothing benefits are given more than housing benefit.

(ii) Seasonal Labour: Seasonal labour, in the area, is perhaps more significant than settled labour. The camps are regular sources of employment for innumerable small dry landholders of far and nearby villages. The seasonal migration of every year, by now, has become a familiar and routine phenomenon, with an organisation of its own. The employers and the seasonal migrants have well established understandings of work payment, etc.

There are mainly two types of peak seasons in Sriramnagar area: paddy season and sugarcane season. In the paddy season, harvesting and transplantation are the chief tasks, while in sugarcane season, it is the cane cutting and transporting it to the factory

Paddy season: The months from March to June and November to December are generally the peak periods for labour mobilisation. The peak season starts with the beginning of the harvesting of Rabi paddy in March and continues up to the end of transplantation in June-July for the Kharif season. By the end of July, most of the migrant labourers return home. As the monsoon sets in, the dry land holders invariably wish to turn to their fields. For them cultivation of their land is the primary work. The landless labourers also return to their villages as they are more likely to get employment in their villages. If the monsoon turns out to be good they continue to stay there itself until the harvest time. If not, they come back to the irrigated areas in search of employment in the harvesting season of Kharif paddy. Landless agricultural labour, in any case, immigrate into these command areas in search of work by November. Again by the beginning of March, seasonal labour starts gathering.



'Gadwal labourers' are favoured for the works on the paddy fields. Kannada workers especially Lambadi workers, are specialised in Sugarcane cutting.

Sugarcane Season: Sugarcane, being an annual crop, has only one peak season. The cutting starts from December and continues till February. During these three months hectic activities of sugarcane cutting and its transportation to the factory take place day and night. Sugarcane is a crop that needs to be transported to the factory and crushed with as little a time lag as possible. The nearest sugar factory for Sriramnagar is the Gangavathi Sugars, situated at about 3 km. away from Sriramnagar towards Gangavathi. The factory has got crushing capacity of 10,000 tons per day. For supplying cane to the factory at this rate, a lot of manpower to cut the cane and transport the same to the factory is required. For the transportation of the cane innumerable tyre carts, country carts, tractors and lorries are employed.

The season ends usually after three months, when all sugarcane gets exhausted. The seasonal labourers, cane cutters, cart drivers etc., go back to their native places. A majority of the cane cutters are the Lambadi families from the dry villages of the district as well as from the neighboring districts of Dharwar, Bijapur and Gulberga.

One would wonder how such a mass scale seasonal migration is coordinated with large labour requirements at the fields. There are three types of coordinations. First, many of the seasonally migrating labourers generally go to the same employers every year

at the time of peak season. It is an informal understanding between employers and labourers. Secondly, the locally available 'maistries' work as brokers for labour supply. When order is placed for the required number of labourers, with some advance money, the maistries bring labourers from different villages. Thirdly, the employers themselves go to different villages to place orders for labourers. In such cases generally they make advances to the labourers to meet their travel expenses and to be assured of their availability.

The seasonal labour is generally given shelter by the employer himself. The employers provide sheds in the backyards of their houses or in the fields. Some migrants even bring their cattle along with them as they could not leave them in their villages for months on end. Once they come here, they serve different peasants for the whole of the season before they go back.

To sum up, it has been argued that demand for labour goes up sharply in an irrigated zone. And in the post-irrigation scenario of the Raichur district, both population and labour made rapid strides. In the expansion of the labour market, it is argued here, that the migrant farmers played an important role. Partly in response to the emerging new situations, and partly out of necessity the nature of the labour market had rapidly changed, bringing in new types of labour and novel varieties of labour recruitment and wage-payments.

## CREDIT MARKET

Credit availability is an essential ingredient for any developmental process. With the introduction of extensive irrigation, Raichur, till then a dry district, developed a potential for agricultural development. It involved a task of developing a localised area of nearly six lakh acres and carrying on wet and intensive cultivation on it, which inherently requires the infrastructure necessary to go with it. This massive innovative task cannot be met without credit facilities. And indeed, over period, Raichur district achieved a rapid agricultural development due to irrigation, for which credit availability played and continue to play a vital role in agriculture. Here we are interested in examining, how the credit availability in the initial stages of irrigation came about for purposes of land development, loans for raising crops and developing the infrastructure, and the role the migrants played in all these activities.

### Land Development

The first task that the cultivators faced in making use of irrigation water was to develop the land i.e., make the land fit for wet cultivation. State Government and the other banking agencies like Agricultural Refinance Corporation through various cooperative Land Development Banks and commercial banks announced land development loans to the cultivators in order to facilitate immediate use of irrigation. The first agent to come forward was the Agricultural Department of the State Government with Takkavi

loans<sup>2</sup>. However, before migration, local farmers' response to these facilities was lukewarm. Noticing this feature, the authorities took initiative in persuading villagers to accept the loans. They used to take the loan applications from the locals and distribute loans on the spot. Even then locals were not forthcoming for levelling of their lands, as they feared that uprooting the soil may lead to loss of soil fertility<sup>3</sup>. Land development did not pick up a momentum until the migrants appeared on the scene. Some of the migrants who came with large sums of capital, went on developing their lands on their own. Many small and medium migrant farmers were also able to self finance the improvement of lands up to one or two acres. Many a time migrants used to help each other. They had also availed of the Takkavi given loans by the State Government. But it was not until early sixties, that the land development activity had really been geared up. With the inflow of migrants, there was an increasing need for land development. In 1961 a Primary Land Development Bank was established in Gangavathi, which began to meet the increasing credit needs of land development. In 1957 there was only one Primary Cooperative Land Development Bank in the district, which lent Rs.37,000 in the form of term loans. By

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<sup>2</sup>Between 1963-64 and 1965-66, in the district as a whole, Rs.7,67,000 were distributed as Takkavi loans for purposes of land development.

<sup>3</sup>After a year or so, the authorities observed that locals had not utilised the land development loans given to them. In an attempt to boost up the land development activities, the authorities issued notices to the farmers that, within four months of the issual of the notice, if the cultivators fail to develop at least one fourth of the land for which they were issued loans, their lands will be confiscated and auctioned. Fearing the notice, all the locals started selling their lands. Also, the farmers who developed their lands, but did not know how to undertake wet cultivation, joined the others in selling off their lands.

1961, there were nine such banks, which together lent Rs. 1,25,000 in that year. The number of banks remained the same ever since. In 1968, the total amount of loans advanced by them was Rs. 91,11,000 and in 1969, the lendings went up to Rs. 2,94,85,666, out of which Rs. 1,44,17,660 were advanced for purpose of land development. The Agricultural Refinance Corporation of India took up a special interest in getting the land under Left Bank Canal developed faster. Under a special scheme it granted and distributed Rs. 5,59,00,000, within a period of seven years starting from 1966, for purposes of land development through the Primary Land Development Banks<sup>4</sup>.

#### Crop Loans

In the pre-irrigation period for agricultural finance, the local farmers used to depend either on own resources or on the village money lenders. Dry cultivation, in any case, did not require larger sums of money for purposes of cultivation. Wet cultivation on the other hand involved expenditure on seeds, fertilizers, land preparation, weeding, pesticides, harvesting etc. The migrants who were the popularisers of wet cultivation in this region were in need of crop loans. As stated earlier not many migrants were rich enough to carry on cultivation with their own resources, for a majority of them were small and medium farmers. The lending agents like commercial banks or primary credit societies were late to come to this area. Hence, the first choice for them to look for help was the local 'sowcars<sup>5</sup>',

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<sup>4</sup>The data for the above discussion are from Anon, 1970.

<sup>5</sup>Rich merchants are locally called as 'sowcars'.

generally the dallali<sup>6</sup>/fertiliser dealers, with whom they would have further dealings.

In the case of Hebbala, the migrants used to approach the local sowcars of Gangavathi for loans. During the early years, migrants found it difficult to win the confidence of the local sowcars. The early migrants used to employ one of their young sons or relatives in the sowcars' dallali office, as a matter of security, for the loans he received from the sowcar. These employees used to keep the offices clean, and render other petty services. The duration of their job would be till the full repayment of loan is made by their parents or guardians. The loans ranged from of Rs.1,000 to Rs.20,000 and sometimes even more. The hard working migrants used to put the money to good use and repay the loans promptly. Thus they established credentials of their sincerity and honesty with the Gangavathi sowcars. As the sowcars were also able to make money in these dealings, they used to respond to the migrants' credit needs more liberally. Gradually, the sowcars began to trust the migrants. Over the years the new batches of migrants used to obtain loans from the sowcars just on the strength of proper introduction given by any of the established early migrant. The migrants, in turn, not only used to pay back the loans promptly, but also get fertilisers from the sowcars and sell them their produce. The dealings between the migrants and the sowcars were found to be mutually beneficial.

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<sup>6</sup>Licensed intermediaries between sellers and purchasers of agriculture product

Agriculture Primary Credit Societies emerged somewhat late in the region and they never seemed to have developed enough to render satisfactory service to the farmers. In the district as a whole there were 501 Primary Credit Societies in 1968 and they lent Rs. 15,76,000 as medium and short term loans. In 1969 the number rose to 634 and the amount lent was Rs.1,48,50,000. The farmers in Hebbala continued to complain till late sixties that loans from the credit societies were inadequate.

The dependency of migrants on local sowcars continued to be heavy, at least until the nationalisation of commercial banks in 1969. After 1969, though the commercial banks started advancing crop loans, the migrants continued to go to the sowcars for a few more years. In the meanwhile, as some of the migrants defaulted in loan repayment, the sowcars cut down their lendings to the migrant farmers. In due course, some migrants, especially, those who got the work experience in the sowcars' dallali offices, established themselves as the intermediaries in the village.

At present, the intermediaries meet some of the credit needs of the small farmers from amongst the migrants and locals, especially for cultivating the leased-in lands, as obtaining a bank loan in those cases is a difficult proposition. However, majority of the credit needs for crops are presently being met by the Syndicate Bank, Sriramnagar.

Table 4.18 gives details of loans advanced by the commercial bank and dallali merchants to 50 local and 50 migrant farmers in Sriramnagar in 1987-88.

Table 4.18 : Crop Loans in Sriramnagar, 1987-88

Loans	Commercial banks		d/f merchants		Total	
	Locals	Migrants	Locals	Migrants	Locals	Migrants
Number of loans	38	50	7	20	50	50
Total(Rs)	314500	1319500	3800	138500	318300	1458000
Average(Rs)	8276	26390	5428	6925	6366	29160

Source: Village Survey.

In the case of both the local and migrant farmers, well over 90 percent of the crop loans come from the commercial banks. However, it is interesting to note that on an average whereas a local farmer seeks a crop loan of about Rs.6400, the migrant farmer's crop loan requirements are well over Rs.29,000. Thus, the crop loan requirements of an average migrant farmer in Sriramnagar are almost five times higher than that of a local.

Loans for Fixed Assets:

The third major purpose of credit in the village is for financing the purchase of fixed assets such as tractor, other machinery, implements, construction of farm houses, godowns, etc. Table 4.19 gives details of loans taken by 50 local and 50 migrant farmers for the development of infrastructure, which shows that the migrants were way ahead of the locals in obtaining loans for the development of infrastructure.

Table 4.19 : Loans for Purchase of Fixed Assets (Rs.)

Farmers	Tractor		Tyre carts		Gobar Gas		Others	Grand Total
	No.	Total	No.	Total	No.	Total	Total	
Locals	-	-	17	1,36,000	-	-	98,250	2,34,250
Migrants	6	7,18,000	8	80,000	13	13,000	26,000	8,37,000

Source: Village Survey.



### Loans from Petty Money Lenders

In spite of the existence of the commercial Bank and Co-operative credit societies, perhaps there has always been some scope for the petty money lenders to operate. For small amounts of immediate requirements, villagers do approach the money lenders. In Sriramnagar there are six 'finance corporations', all run by the migrants lending small amounts as short term loans. Besides there are three 'seth' families in the lending business. Table 4.20 gives particulars of loans advanced by the unorganised sector to 100 farmers - 50 migrants and 50 locals.

**Table 4.20 : Credit from Petty Money Lenders**

Farmers	Number of farmers	Total loan (Rs.)
Locals	27	32100
Migrants	14	14700

Source: Village Survey.

### Aggregate credit

**Table 4.21 : Aggregate Credit**  
(Rs.)

Farmers	Total	Average per farmer
locals (50)	5,80,850	11,617
migrants(50)	25,22,200	50,444

Source: Village Survey.

It is interesting to note that, on an average, the total credit availed of by migrant farmers in Sriramnagar is four-fold higher than that by the local farmers (Table 4.21). This is, in

a way, an indirect evidence of the advances made by the migrant farmers in terms of asset formation, expansion of production unit and higher levels of credit requirements compared to the local farmers.

#### CROP PATTERN CHOICE

Having seen the differential nature of involvement of the migrant and local farmers in land, labour and credit markets, we now turn to look at the difference with respect to the cropping pattern which would indicate the extent to which wet cultivation techniques could be adopted by the migrant and local groups of farmers.

That irrigation generally helps the processes of agrarian expansion and growth is too obvious a statement that needs any emphasis. What is much more interesting in the case of Tungabhadra command area was the positive role the migrants played in these processes. Having out migrated from the rice-bowl of Andhra, they had the required expertise in wet cultivation in general and paddy cultivation in particular. No wonder along with the rise in immigration, paddy cultivation gained importance in the command area.

That the local Kannada farmers in the command area were less enthusiastic about paddy cultivation during the initial phase of the canal irrigation is borne out by a case study of two sets of 50 farmers selected at random from the 'Kasarapani'<sup>7</sup>

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<sup>7</sup>Kasarapani' is the record maintained by the village accountant (Kulkarni) on the land holdings and cropping pattern in the village. There used to be a single registered volume for

Table 4.22 : Crop Choice of Locals and Immigrants in the Hebbela Village, 1955-57 and 1958-60

Year	Paddy		Jowar		Nowne		Bajra		Sugar cane		Cotton		Others		Total	
	Loc	Mig	Loc	Mig	Loc	Mig	Loc	Mig	Loc	Mig	Loc	Mig	Loc	Mig	Loc	Mig
55-56	-	-	48.85	-	77.75	-	5.10	-	-	-	337.97	-	4.00	-	573.67	-
56-57	5.3	23.15	171.40	-	101.95	-	8.68	-	-	-	389.10	-	2.08	-	678.51	23.15
57-58	0.76	18.25	128.79	-	92.10	-	4.65	-	-	-	487.05	-	56.40	-	689.75	188.25
1958-59	6.70	138.00	123.05	-	190.65	-	-	-	23.00	23.60	94.25	-	17.00	0.25	454.65	161.85
59-60	17.00	228.50	104.90	-	104.35	-	-	-	17.00	15.30	125.00	-	7.00	1.50	375.25	245.30
60-61	135.20	362.25	103.60	-	44.70	-	-	-	19.25	30.50	45.65	-	14.00	-	262.70	392.75

Note: Loc = locals, mig = migrants.

Source : Village 'Kasarapani', Taluk Office, Gangavathi.

It was in 1957 that the migrants entered into the Village Hebbala. During the first year the migrant farmers of our sample, cultivated 23.15 acres, all under paddy. In late 1950s, the paddy-area cultivated by the migrants (of a sample) increased by eight to ten-fold. It is interesting to note that during the later part of the 1950s, whereas paddy dominated the cropping pattern of migrants, jowar, nowne and cotton were the main crops for the locals.

As per the information collected from a sample of 50 migrants and 50 locals, during the Kharif season of the year 1988-89, the cropping pattern of the migrants is dominated by paddy and sugarcane whereas the locals mostly grow sugarcane and jowar (Table 4.23). Less skill involved in the cultivation of sugarcane as well as the fact that a sugar factory is located within a distance of three km. appear to have prompted the local farmers to go in for sugarcane cultivation.

every three years, and entries were made in the name of the cultivator. We could not collect information for the same set of 50 farmers. The sets were different for the two sub-periods of three years each. Hence, temporally speaking data across the two sub-periods in Table 4.22 are not comparable. However, the main point that in terms of paddy cultivation the locals lagged behind the immigrants is borne out by Table 4.22.

Table 4.23 : Cropping Pattern in Sriramnagar,  
Kharif season, 1988-89.

Farmer	Paddy	Sugar cane	Jowar	Nowne	Cotton	Maize	Others	Total Area
Migrants	51.19	33.09	-	-	6.53	-	9.19	674
Locals	17.42	52.81	17.97	5.06	1.69	3.39	1.69	178
Total	44.13	37.21	3.64	1.06	5.52	0.70	7.63	852

Source: Village Survey.

The difference in the cropping pattern between the migrant and local farmers as observed above seems to be closely related to the differential access to irrigation water. We shall now turn to a brief description of how this has come about and what are the larger implications of this from the point of view of efficient use of water in a highly water-scarce region such as Raichur district.

#### ACCESS TO IRRIGATION WATER

After land water was an important resource for the farmers in an irrigated zone. And even here the migrants turned the situation in their favour. They had set up their first settlements in the upper reach area of the canal. Lands in the upper reaches in mid-1950s were located far away from the then existing villages. The locals then were only too willing to sell these lands to the migrants. The lands they eventually retained were those nearer to their villages<sup>8</sup>. Unfortunately these lands

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<sup>8</sup>The lay out of the canal net work was such that villages formed the reach-out points for the sub-canals. This was in confirmity with the objective of the whole Project that water should reach maximum possible number of villages in order to have a wide coverage of water supply and as well as eliminate the

There are two types of defaults generally noticed in water utilisation in the area: (i) Violation of cropping pattern rules within the localised area and (ii) Irrigation outside the localisation area.

It is noted earlier that migrants introduced themselves into the area with paddy cultivation, in which they had expertise and interest, and thus started off as initiators of wet cultivation in the area. In the general disinterest shown by locals towards irrigation, the initiation given by the migrants to wet cultivation was welcomed. Then it really did not matter which crop the migrants were going for, as long as they were spreading wet cultivation in the region. However, around late 1960s there appeared a move to tighten the irrigation rules by the authorities. But, it was said that, the direct interference by the then Chief Minister of Karnataka, Mr. Nijalingappa, to let the migrants grow whatever crop they want, stalled any further action against the defaulters.<sup>11</sup> Thus Paddy cultivation went on unhindered and got well established in the area.

Paddy cultivation in the upper reaches caused a chain effect of paddy cultivation on the immediate lower reaches also. Because of water intensive cultivation at upper reaches, the lands down the reach were subjected to high water seepage. The report on LBC notes that: "On account of drawing more water for unauthorised irrigation in upper reaches, the tail end areas are affected by seepage and this seepage is mostly due to chain

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<sup>11</sup>The Chief Minister's interference perhaps could be because of the feeling that migrants were acting as growth agents and in the context of food grain crisis at the national level at that time, he did not wish to put constraints on paddy cultivation in the Tugabhadra area.

reaction by growing unauthorised paddy in the fields situated in upper reaches and not due to natural causes."(Ibid, p.8). As a result, Paddy cultivation propelled itself as far as seepage water reached.

Somewhat serious efforts have been made to contain the paddy cultivation by authorities from mid 1970s onwards. Fines were imposed on unauthorised Paddy cultivation. They could not act as deterrent, "... for violation of cropping pattern and unauthorised irrigation, penalties are being levied and so far penalties to the tune of about Rs.50 crores have been imposed since 1974 to 1986-87. But none is collected and no irrigation offence is disposed in time, and the actions taken by the irrigation officers as per the K.I (Karnataka Irrigation) Act 1965, has not given fruitful result in curbing unauthorised irrigation".(Ibid, p.7).

The chief reason for the stalemate in collection of fines, according to the Executive Engineer, LBC Division 1, Wadderahatti, was the administrative obstacle between the Irrigation Department (the one which imposes fines) and the revenue department (the one which collects fines) More often, the shrewd migrants could avoid receiving the notices issued by the Irrigation authorities, so that they would be in no position to file a case against them (unless the cultivator is issued notice, case cannot be filed). And in many cases, the case would be lost for lack of evidence or a witness.

Irrigation authorities tried to stop water supply for the defaulters. But the ayacutdars organised mass protests against the authorities. " ... the ryots came as a mob, gheraoed the officers, threatened the irrigation staff, operated the sluices unauthorisedly and in some cases they have man-handled the irrigation staff" (Ibid, p.8).

Apart from other manipulations, the migrants also bribed the Work Inspectors, to record smaller extent of their paddy acreage or write down another crop for paddy.

The second type of fraud is irrigation outside the localised area. Legally the farm may be falling outside the localised area, but farmers get water to the fields by "indulging in illegal activities such as break opening the shutters, operating the sluice gates themselves, damaging the structure, cut an opening in the banks etc. So far more than 1000 irrigation offence cases have been booked with the police authorities" (Ibid, p.7).

In many cases, migrants could successfully lobby the authorities to include their farm in the localised area as it was getting natural seepage from the canal, due to which they could not grow any crop other than Paddy.

Altogether, there has been heavy paddy cultivation at the upper reaches of the canal system. The Report on LBC notes that against the localised Paddy area of 51,859 acres, in a agricultural year, under LBC from mile 0 to mile 141, the actual paddy raised was of the order as shown in Table 4.24.

Table 4.24 : Total Area Under Paddy Under LBC Mile 0 to 141  
Between 1983 and 1988

Year	Area (acres)
1983-84	253046
1984-85	138411
1985-86	167983
1986-87	249036
1987-88(proposed)	183000

Source: Anon (1988).

As paddy requires 2 to 2.5 times more water than a light crop, one can imagine the magnitude of the problem in the tail reaches of the canal system.

#### Locals Farmers' Response

The large scale preemption of water by the migrants hardly drew any visible protests from the lower reach (local)farmers.

The tail end farmers generally go for dry crops like Jowar, Bajra, Nowne, etc. Hence they also do not show much anxiety about the prospects of water not reaching their fields. In case they get water in their fields, they go for sugarcane. Otherwise they raise dry crops. Ironically even local farmers raising sugarcane often approach the 'Reddies' with pleas for releasing water to their fields.

The requests to the irrigation authorities by locals seem to have been ineffective. In any case, locals are found to be a poor match for the migrants either in lobbying or bribing the authorities.

The dominance of migrant farmers in the head reaches of the canal system and predominantly going for paddy cultivation has some larger implication for the overall social efficiency of use



of irrigation water, apart from its adverse effect on tail-end farmers in terms of uncertainty and inadequacy of supply of water. The data for Tungabhadra command area shows that whereas from an individual point of view it is rational to go for paddy cultivation because of its high physical yield per unit of area relative to other crops, in terms of yield per unit of water used, paddy is the least preferable crop, both in kharif and rabi seasons. Particularly in the rabi season, paddy uses up 1200 mm. of water per hectare and thus not only rabi jowar and rabi maize, but even summer groundnut acres over summer paddy in terms of output per unit of water (Table 4.25).

Table 4.25 : Land Productivity, Irrigation and Water Productivity of Crops in Tungabhadra Command Area

Crop	Yield (kg./ha.)	Irrigation (mm./ha.)	Productivity of water (kg./ha-cm.)
<u>Kharif</u>			
Paddy	3530	890	26
Jowar	1500	285	35
Bajra	1500	188	53
Cotton	2230	700	64
<u>Rabi</u>			
Jowar	2500	365	45
Maize	3000	365	54
Paddy	4500	1200	25
Groundnut	1800	760	38
<u>Annual</u>			
Sugarcane	80000	2740	29

Note: Yields of different crops have been expressed in rice equivalents by using the respective relative prices.  
Source: Dhawan (1989, p.168).

The point that emerges from the fore going analysis is that there had been enormous difference in the access to resources between the migrants and locals. The enterprising and

foresighted migrants secured greater access to land, water and credit resources, while for the locals, the access was marginalised.

#### RELATIVE ASSET AND EDUCATION LEVELS

Disparities in economic performance between migrant and local farmers become obvious if one observes the relative developments of the migrants' camps and the locals' villages. The very growth in the number of camps in the district stands as a point of significance. Also, it seems that much of the growth in the Raichur district is visible around the migrants' camps. For instance, in our study, Sriramnagar, a camp found around 1956, has developed into a big village with a population of more than 6,000 with 1,452 households and with lot of economic and political significance in the area. Sriramnagar was just a camp until 1973, when it was recognised as a village. In 1983, when Mandal Panchayats were introduced in Karnataka, Sriramnagar was made the headquarters of the Mandal Panchayat, for nearly 15 villages. At present Sriramnagar is one of the prominent villages in Gangavathi Taluk, with a famous cattle and a weekly grain market. The Agricultural surplus from Sriramnagar seems to be flowing into to big towns like Bellary, Raichur etc., for a variety of investments. On the other hand, Hebbala, the original village, is on the decay. In 1961, Hebbala had a population of 2,142 with 431 households. In 1981, the size of population was reduced to 1,440 with 292 households<sup>12</sup>. It is said that before

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<sup>12</sup>In fact, the 1981 population figures include the migrant population living in Hebbala Camp and other migrant farm houses situated in the revenue circle of Hebbala. If population of these camps are eliminated, the population of Hebbala proper as

1956, Hebbala was a big village in that area, with a busy weekly market for which people from surrounding villages used to visit. But now, as stated earlier, it is a declining village. Quite many houses are literally on the verge of collapse.

More specifically, the relative prosperity of the migrants vis-a-vis the locals is amply reflected in terms of their respective asset-holding (Table 4.26).

**Table 4.26 : Asset Holdings of Migrants and Locals**

Assets	No. of Migrants	No. of Locals
1. House		
(a) Pucca	37	14
(b) Semi-pucca	13	25
(c) Kutcha	-	11
1. Bullocks	120	84
3. Buffaloes	275	57
3. Cows	54	56
4. Sheep	56	266
5. Tractors	19	-
6. Sprayers	111	27
7. Pump sets	8	1
8. Tyre carts	48	34
9. Motor cycles	40	-
10. Cars	3	-
11. Gobar Gas Plant	50	-

Source : Village Survey

From Table 4.26, one can easily see the difference in asset accumulation between locals and migrants. The difference is much more striking in ownership of Tractors, Motor cycles, Cars, Gobar gas plants etc.

The difference in the literacy levels of the local and the migrants also reflects the backwardness of locals

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on 1988 was 652, with 156 households in it (information collected from the School Teacher, Hebbala).

**Table 4.27 : Literacy levels of locals and migrants**

Farmers	Population excluding children below 5 years	Literates	Literacy levels
(1)	(2)	(3)	(3) as % of (2)
Locals	173	41	23.69
Migrants	148	78	52.70

Source: Village Survey.

**Table 4.28 : Higher Education Levels Between Locals and Migrants**

Farmers	Iterates	Matriculates	10+2	Graduates	Post-graduates
Locals	41	12	3	-	-
Migrants	78	23	15	8	2

Source: Village Survey.

From Tables 4.27 and 4.28 it is clear that literacy rate is higher (52.70 percent) among migrants than among locals (23.69 percent) Moreover, within the literate group, the level of education attained is higher among migrants than among locals.

It thus emerges from the analysis, in this chapter that through an unequal access to land, credit and after all, water resources and given their earlier familiarity with wet cultivation, the migrant farmers have seized of the economic opportunities thrown up by irrigation to a far greater extent than local farmers.

## SUMMARY AND CONCLUDING REMARKS

One interesting aspect of migration is its role or consequences at the point of destination. In the present day literature on migration, little attention is paid to this aspect. Probably, this is because of relatively greater scholarly attention paid to 'labour migration' as compared to the 'innovative' migration, where migration is likely to be followed by dynamic consequences.

Migration-induced technical change can be thought of as dynamic consequences of migration. Such technical change, consists of: (i) spatial diffusion of techniques and (ii) lateral diffusion of techniques. The induced innovation hypothesis (Boserup, 1962), a variant of which is the case of migration induced technical change can be tested here in terms of both spatial and lateral diffusion.

In the present study, our broad objective has been to test the hypothesis of induced innovation, to see whether or not the inducement mechanism, in terms of both spatial and lateral diffusion process has been at work. We took the case of peasant migration of coastal Andhra Pradesh farmers endowed with wet cultivation techniques, to Raichur district of Karnataka where new irrigation facilities were provided through Tungabhadra Project.

In the analysis that followed, we first examined the agricultural performance of the Raichur district during the post-irrigation period as compared to the agrarian conditions prior to irrigation. We saw that the district experienced rapid agricultural growth in the period after irrigation was

introduced. Thus, the peasant immigration into Raichur district had taken place not in response to post agricultural growth but in response to the perceived economic opportunities thrown up by irrigation.

We then examined the determinants and patterns of peasant migration as well as the initial phase of adoption and consolidation of the immigrants at the point of destination. It was found that though the peasant migrants possessed mostly small holdings at the point of origin, the significant difference in the price of land at the point of destination and the point of origin coupled with the expertise of the peasant migrants in irrigated farming techniques meant that the peasant migrants were rationally responding to more promising economic opportunities. In this sense, we argued that pull factors were more important than push factors in inducing migration. We also found that the innovative capacity of the peasant immigrants was reflected in the way in which they went about gaining a foothold at the point of destination, through collective efforts and their ability to carry out necessary investments in the purchase and development of land.

We then looked at the dynamic role of peasant immigrants vis-a-vis local farmers in terms of both activating, and participating in, the markets in land, labour and credit. Through market and non-market mechanisms, they could secure locational advantages with respect to irrigation water.

Thus, in terms of the broad objective of our study, it may be concluded that peasant immigration has apparently played a dynamic role in terms of adoption of improved techniques to achieve high physical productivity of land, with particular

reference to wet rice cultivation. To this extent, peasant immigration has induced and facilitated productivity-raising technical change perhaps to a greater extent and at a faster pace than that would have been the case in the absence of peasant immigration into this district characterised by a high land-man ratio and traditional dry farming.

At the same time, induced innovation in terms of lateral diffusion of improved techniques to local farmers, one may argue, has been restricted due to the significant presence of peasant immigrants. This is the case insofar as unequal access to land, credit and, above all, irrigation - the most scarce resource in this region - by the peasant immigrants as a group has led to a socially suboptimal irrigation coverage and output per unit of water. The peasant immigrants also have had an initial advantage in terms of their greater capacity to carry out productive investments in the development of land. As a result, there has been an unequal participation as between the immigrant and local farmers in the growth prospects opened up by the public irrigation system. This is not to deny that inequalities within the group of local farmers might have developed, even in the complete absence of immigrant farmers. But then this is altogether a different question. In any case, whether the kind of disparities between immigrant and local farmers that we have highlighted in this study is a general phenomenon in all the irrigated parts of the district or whether a section among the local farmers has been able to hold its own and successfully adapt to wet cultivation are questions which cannot be answered on the basis of a survey of two villages.

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