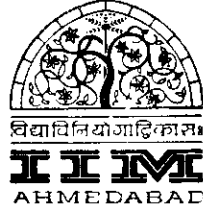
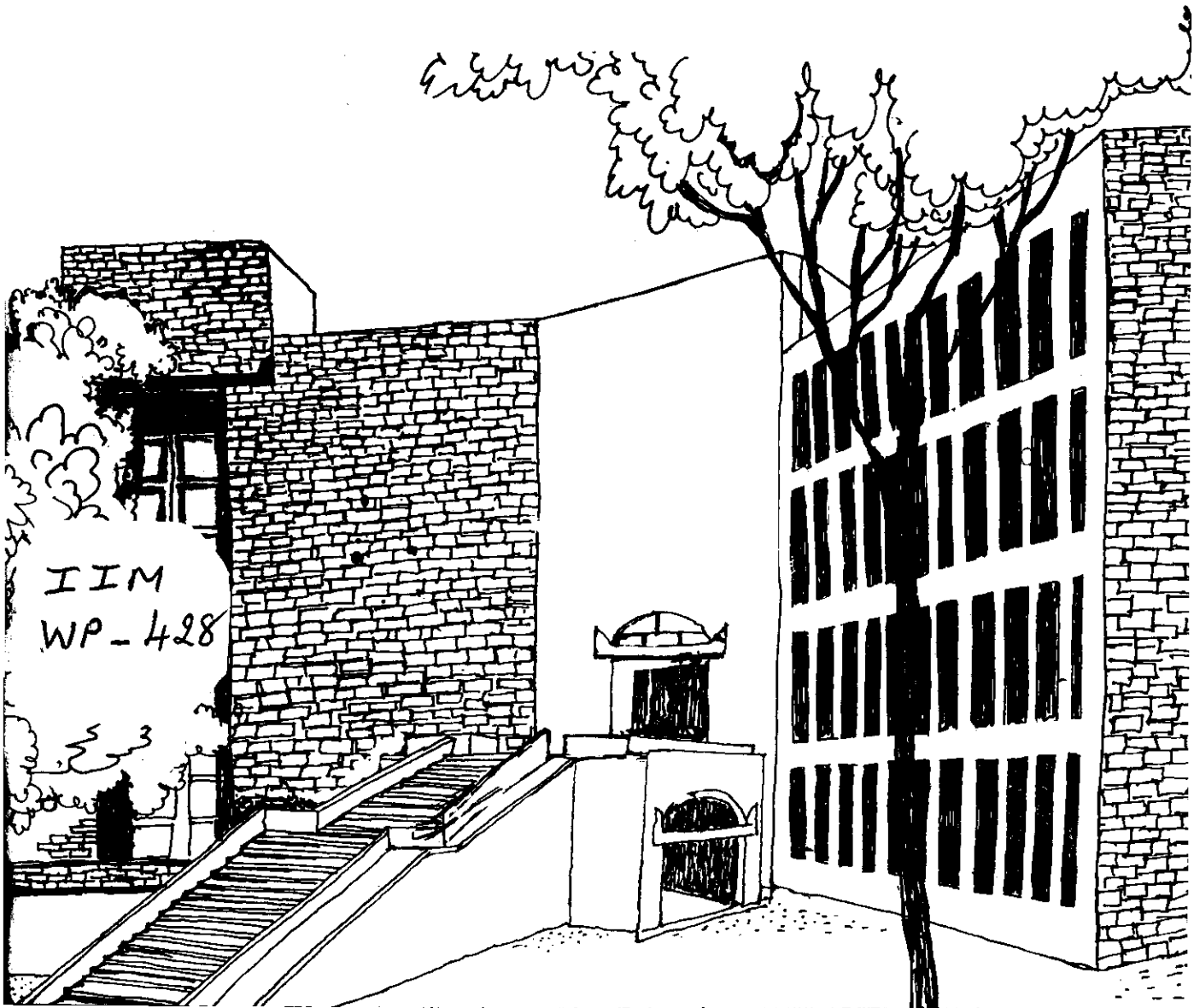


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Working Paper



SEASONALITY, STRATIFICATION AND STAYING
ON PROCESS IN SEMI-ARID REGIONS

By

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SEASONALITY, STRATIFICATION AND STAYING ON PROCESS IN SEMI-ARID REGIONS

In the semi-arid regions, various sections of society have varying homeo-static ability to deal with the stress of shortages of food and employment that drought imposes, which probably explains why more people stay on instead of migrating. In this paper we offer a framework for analysis of the problem of rural population retention particularly in dry, semi-arid regions from the point of view of seasonality and stratification, both of which seem to be strongly related. The tentative evidence presented here helps in hypothesizing certain reasons for the observed relationships.

The review of literature on the subject briefly reported below highlights the need for more detailed analysis in this regard. The research resource allocation too has been heavily biased towards the problems of the regions which receive the population, namely, the 'urban' or irrigated rural regions rather than of the places where some people push other people out. This paper argues for urgency of change in the bias. In Part II, a discussion on seasonality and stratification is presented with the help of evidence from Haryana and Western Maharashtra. In Part III, the case illustration on staying on processes is presented and in the last part a conceptual framework for analysing these problems is presented which takes us beyond the push-pull equation.

PART I

Literature Review: Why People Move Out:

Recent studies at I.L.O have disputed the traditional classical as well as neo-classical approaches to study internal migration. As per the classical approach, "migration occurs from low productivity subsistence rural areas (the strict version asserts that such labour is "surplus", see Lewis 1954) to high productivity, urban industrial wage - Labour areas. The neo-classical approach regards the migration decision as a purely individual and economic one, with the goal of maximizing the expected future income stream over space or the "probability of receiving such expected future income streams" (Bilsborrow 1981). These approaches have been criticized mainly because they don't explain, "why in view of continuing income-differentials, only a small proportion of the population migrates out from the poorer areas during any given time period". The question thus raised is the need to explain why most people do not move as well as why a small percentage does? The importance of considering various factors such as land tenure arrangements, mechanization, performance of formal and informal credit market, labour contract relations, rural-craft enterprises etc. is mentioned (Bilsborrow 1981). Linkages between land distribution, technological change and out-migrations have also been shown (Rhode 1979, Brown and Gilliard 1981).

The rural population retention has been shown to be influenced by non-farm employment activities in many countries like Ecuador, Brazil, Mexico etc. It has been suggested that when these activities do not offer sufficient income, out-migration of a member of a family or the entire family takes place (Oberoi & Singh 1980, Rugo, 1979, Connel et al 1976, quoted in Bilsborrow 1981).

Natural disasters and cultural norms also contribute to out-migration although these factors are often ignored (Bilsborrow 1981, Spitz 1980). It has been argued that "force working within society towards an increased control of the land by a few and the dispossession of marginal peasants (who are then forced to migrate to cities) find the opportunity to expand in a crisis situation such as drought" (Spitz 1980). Chronic distress conditions punctuated by famines have been considered to be one of the main push factors for emigration from the rural areas (UNRISD 1978, Bilsborrow 1981). However, contrary to general belief, even from drought prone regions, the migration process is very complex and are its halting policies. Land holding pattern becomes particularly important in this context, which could also be considered a proxy for income distribution.

There could be some households with larger size of land and higher income which facilitates their financing an out-migration by a family member; for families with very little land and meagre income, it becomes necessary to send a household member out as a labour so that all the members could survive (Lipton 1980). In the former case, it has been hypothesized that migration "both facilitate borrowing and stimulates creativity"(Scott 1968). Such a view has led most people to argue for policies that facilitate migration such as investment in skill building, transportation, information exchange about various places of possible employment etc.

It has been argued that, "It would be nonsense, and probably evil, to respond to the disappointing result of migration by restricting it. Migration is chiefly a response to imbalances in the communities of origin: a response to deepseated irregularities and rigidities which push out those of the poor who can muster a few scanty sources for the move, and enable the better off (who have seized most of the community's surplus but cannot, within their place of residence, use it to improve their income or status substantially) to be pulled out" (Lipton 1980). "It is further stressed that migration from rural areas is due to the urban bias of policies. The agriculture sector as a whole is disadvantaged. However, rural-urban migration is found, on balance, to be enriching them, and enabling the migrants (the poor rural people) to share, to be enriching them, and enabling the migrants (the poor rural people) to share, however directly in the artificial light of biased urban development" (Lipton 1980).

Surely, there is something wrong in the whole causative-linkage picture as apparent from the brief review which leads to the formulation of several scenarios such as below:

(i) Rural areas are losing "better off" people to the urban sector (Castillo 1979, Bilsborrow 1981) and yet it is argued as mentioned above that on balance, the process allows rural poor to have a slice out of biased urban development. Or are we implying that the better off people from the rural areas are also the beneficiaries of urban-maldevelopment?

(ii) Returnees are argued to be failures in case of Phillipines (Castillo 1979) and have been found to have contributed to some marked social and economic changes in Africa (IDRC-TS 60; 1977). In India, return migration has been suggested to have a bearing on spread of new values, information about family planning, and introduction of new family size concepts (Oberoi & Singh 1980).

It has also been suggested that returnees bring new skills into rural areas. However, a case study of movement of labour from dry to irrigated village showed that often new skills may have no correspondence with either requirement of returnees own land and crop demands or even with the general dry village economy and skill needs (Gupta 1980).

(iii) The migrants are found to be universally in the young age group with better educational qualifications. However, the study referred above on rural migration showed how competition between landlords of dry and migrated villages for labour in different seasons led to such a performance of labour market that from dry villages, only the aged people moved out. The landlords offered easy debts during the festival seasons and other contingencies to the marginal farmers who in turn contracted their young sons to the landlords for vraying periods. The aged parents went out for work for 3-4 months. We will return later to this credit - labour market interpenetration as a mechanizm influencing the staying on process in dry villages.

(iv) The operation of "pull and push" factor in migration has been well understood but what remains unclear is the dynamics and inter-relationships of push and pull factor in different ecological conditions. The failure of growth centre oriented policies in most developed (Holland 1978) and developing

countries (Fuchenlo & Kamal Salih 1977) has put a question mark before most policies which argue for creating filters in the form of towns or 'agropolitan' centre (Freidman) for checking congestion of big cities.

The receiving regions have received much greater attention than the sending regions in research and action. The result is, one assumes, linearity between urban problem and rural problem. Urban problem is defined as too many people crowding too little space, amenities, jobs, etc. while rural problem is defined as the incapacity of agricultural growth process to absorb increasing labour force. Industrialization is found to become more and more capital intensive with the result bimodal development strategy also does not seem to hold much hope.

The process through which increase in labour force is taking place is not studied because such increase is assumed to be a logical outcome of the modernization strategy of development. While studies have shown that drought prone regions contribute significantly towards the out-migration, yet socio-ecology has not assumed any important place in the research on rural - rural or rural-urban movement of the population.

In the next part, data on seasonality and stratification are being presented from two different drought prone regions of the country to illustrate the complexity of the process requiring a more elaborate framework for analysing staying on process than mere push-pull equations.

PART II

Seasonality and Stratification

Regional economic growth variables like agricultural productivity levels have been found to be related to population shifts (Sicat, 1972 in IDRC 1977) but it is not always true that the process through which people move out is the same in all regions of similar productivity level. In other words even if the dry plain and dry undulated tract, as we would show here, have comparable productivity levels, they will not be characterized by similar process of marginalization. The exit of people under pressure of economic stress cannot be equated with the exit of those who, though poor, can take risk of going to unknown destination for better prospects. In the former case, the exit is forced while in the latter case, it is near-voluntary. Policies to check exit of both types, therefore, will have to be different.

We will present below the evidence on the role of drought, seasonality, and stratification on compulsions for population shifts from two regions, i.e. Haryana and Western Maharashtra. One need not look for conclusive evidence here, as already mentioned in the beginning. This is just an attempt to present a framework which can sharpen the tools and techniques of enquiry in this field of research.

Haryana:

In a semi-arid district on the border of Rajasthan the land transfers were studied in three different blocks (an administrative unit comprising generally of 50,000 people or 100 villages) in eight villages selected on the basis of ecological diversity and extent of formal financial intermediation.

The hypothesis is that the places which are better endowed, better irrigated, and receive higher institutional finance in turn have higher intra and inter village land transfers. The process of staying on in these villages should also be considerably influenced by interface between formal and informal credit market. Those who receive bank credit would find it easier to further lend to a larger number of people such that through debt and debt-labour linkage, even if it is economical to go out, many marginal farmers would continue to stay-on their marginal and even uneconomic holdings.

Drought often leads to the transfer of some people from 'stable niche' to 'unstable niche'. The former is characterized by such an extent of subsistence when deficits in the budget in one season or one year can be evened out in other season or year. In the latter case however, the deficit gets so increased that debts, mortgage of lands etc., result. This may eventually lead to partial land transfer, first, as an effort to salvage the household condition and later to even quit the context for certain other pastures which may not be greener as assumed in classical migration literature.

In Table 1, one observes the monthwise and yearwise land mortgaged to individuals (M.I), mortgaged to bank (M.B) and sales. The M.I. reflects the extent to which secured collateral has assumed importance in the informal credit market while the M.B. reflects the extent of financial intermediation for capital investment in agriculture. Since the land is mortgaged to banks generally for minor irrigation or mechanization purposes only, the extent of M.B. also reflects the intensification of agriculture. The sales(S) are outright transfers (mechanization has been shown to replace labour which even after accounting for its increase through intensification of agriculture,

Table 1

A SEMI-ARID REGION OF HARYANA - NANGAL CHOUDHARY BLOCK 1960-1980

	January	February	March	April	May	June	July	August	September	October	November	December
M.I.	1	1	3	2	3	8	3	1	1	1	1	4
M.B.	15	15	9	13	13	20	7	10	4	4	13	9
S	5	4	5	6	18	10	14	6	5	8	6	6

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
M.I.	-	4	-	-	-	-	4	5	-	-	-	1	1	3	4	1	-	3	2	1	-
M.B.	-	-	-	-	-	-	-	-	1	-	-	3	4	10	4	12	6	34	19	38	1
S	10	8	1	-	3	-	2	7	1	-	-	1	4	-	5	11	8	11	14	4	3

still remains higher i.e. there is a net displacement of labour, though at peak times, demand for labour still may exist).

The years 1960-61, 1967, 1975, 1978-79 were drought years in this region. Apart from significantly higher frequency of sales as well as M.I. in these years, one also notes the significant increase in land mortgage and transfer after 1971-72, the year from when financial intermediation also increased. Two important things had happened during this time. One was the pressure for increasing credit flow from banks consequent to nationalization of banks in 1969. Secondly, there was a massive flow of credit specifically towards modernization (particularly tractors) and to some extent towards minor irrigation through World Bank's first line of credit. The intensification of agrarian economy seems to have had an effect which only gets accentuated in the drought year when poor are short of food, employment, and cash while rich find even their reduced stocks overvalued due to increase in prices and demand.

Viewing this process monthwise, one notes sharp decline in land transfers as well as mortgages after July, the month when usually rainy season sets in. Land transfers and mortgages are at their peak in May, June and July, probably due to these reasons:

- a) The farmers who have irrigation and thus can take winter crops have cash surpluses after crop disposal;
- b) The farmers who are dependent only on kharif or rainfed crops need cash not only for investment in farm but also for surviving (food for tiding over the time) till they have their own crop harvests;
- c) These two-three months are also characterized by heavy rush for marriages and construction activities, both to be finished before rains start;

- d) Bank mortgages i.e. bank finance also flows much more in the first half of the year i.e. during rabi or winter crop season rather than during the kharif season. Even otherwise, studies have shown that even the working capital loans are given much more in rabi season than in kharif season. In the latter case, crops are more uncertain and farmers prefer to take risk with informal credit rather than bank credit. Informal loan can be easily extended or repaid in kind or labour etc., while bank credit is considered by the poorer farmers as less flexible, notwithstanding the fact that the access of small rainfed farmers to the banks even otherwise is very poor.

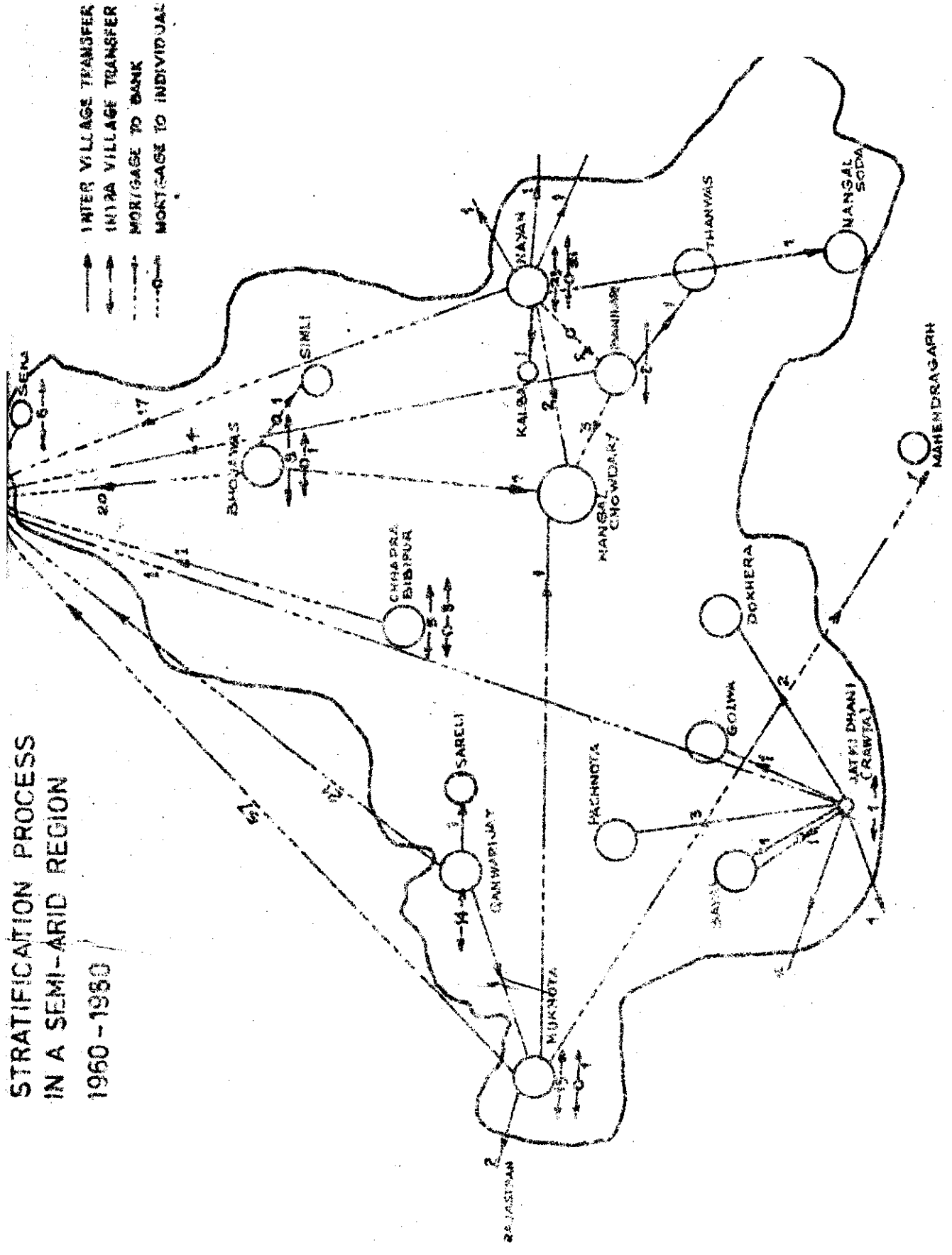
Implications of this process become more explicit when we look at Figure 1 which shows intra and inter village transfers in the sample 8 villages in one of the blocks of Haryana for the period 1960-1980.

On the one hand there are villages which have negligible intra-village transfers but very high inter-village transfers, such as Jatki Dhani (Rawta) whereas on the other hand, there are some with opposite or intermediate characteristics (e.g. Mukhota, Nyan etc.)

The near-absence of intra-village transfers implies that capital accumulation in such villages (say D-type) even at the bigger farm is not so much as to induce land transfer within the villages.

Buyers thus are from outside. Incidentally, this pattern is contrasted with more intra and inter village transfers (I-Type). In the case of D-type village, the land is undulated, slightly mountainous and has forests with sheep and goat population in greater predominance. Cows and bullocks are much lesser while buffaloes are very few. Minor irrigation is very meagre. Such a village typifies an economy from where it may be possible for poorer farmers to manage their livelihood with livestock enterprise till drought strikes either the mortality of sheeps or severe shortage of food leading to

**STRATIFICATION PROCESS
IN A SEMI-ARID REGION
1960 - 1980**



debts which might eventually call for selling land. In I-type villages the stratification process is much more sharper and uprooting may be faster than say in livestock predominant villages i.e. D-Type villages unless of course a big epidemic leads to heavy mortality which is not very unusual in drought year. The availability of buyers within the village changes the mix of options that are available before a marginal farmer who is on the threshold of exit. High value of land and possibility of realizing this value through sale affects informal credit market also. Big farmer-cum-money lenders would be very much interested in burdening the small borrowers with debts more than they can ever pay back so that progressively they may force the farmers to first mortgage land and then dispose it off. The push factor operates very differently in these two types of villages. In other variants of these two extremes, the processes are also likely to be different.

The evidence in the case of Haryana, we must admit, is very weak and only some tentative directions for further work emerge. In the case of western Maharashtra, however we get a clearer picture.

Western Maharashtra

A detailed review of drought conditions and their effects on rural economy in Western Maharashtra are available elsewhere (Ladejinsky 1972, Gupta 1981 6, c). We have tried to analyse the effect of seasonality and stratification in two contexts: the dry village Dhawalpuri and its 13 hamlets, and the irrigated village Nandur in an irrigated taluka*

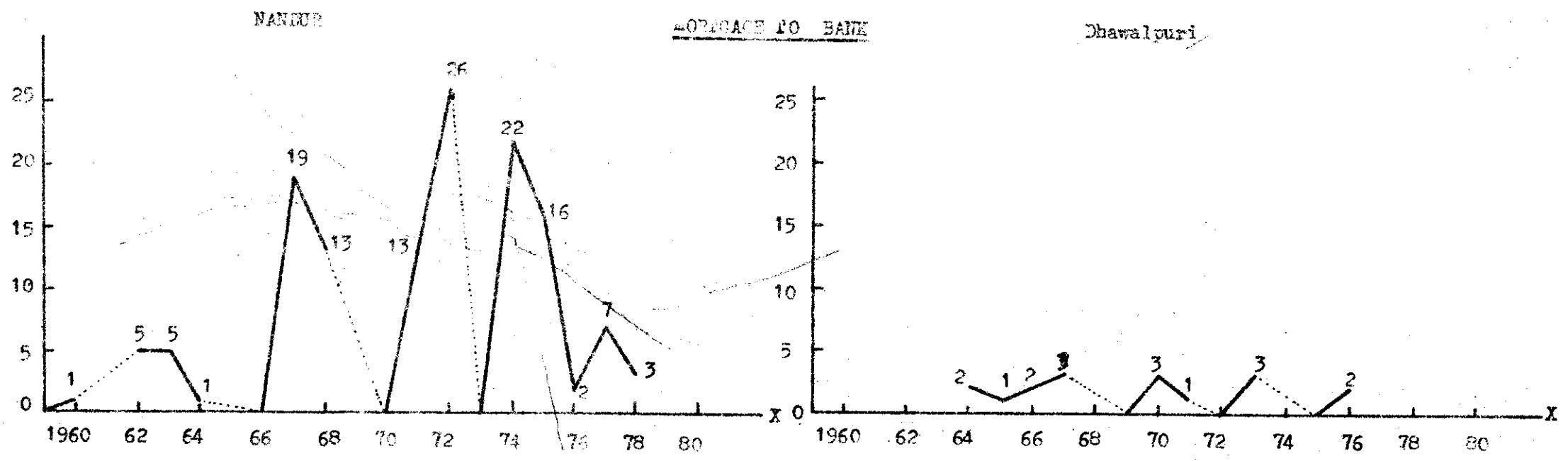
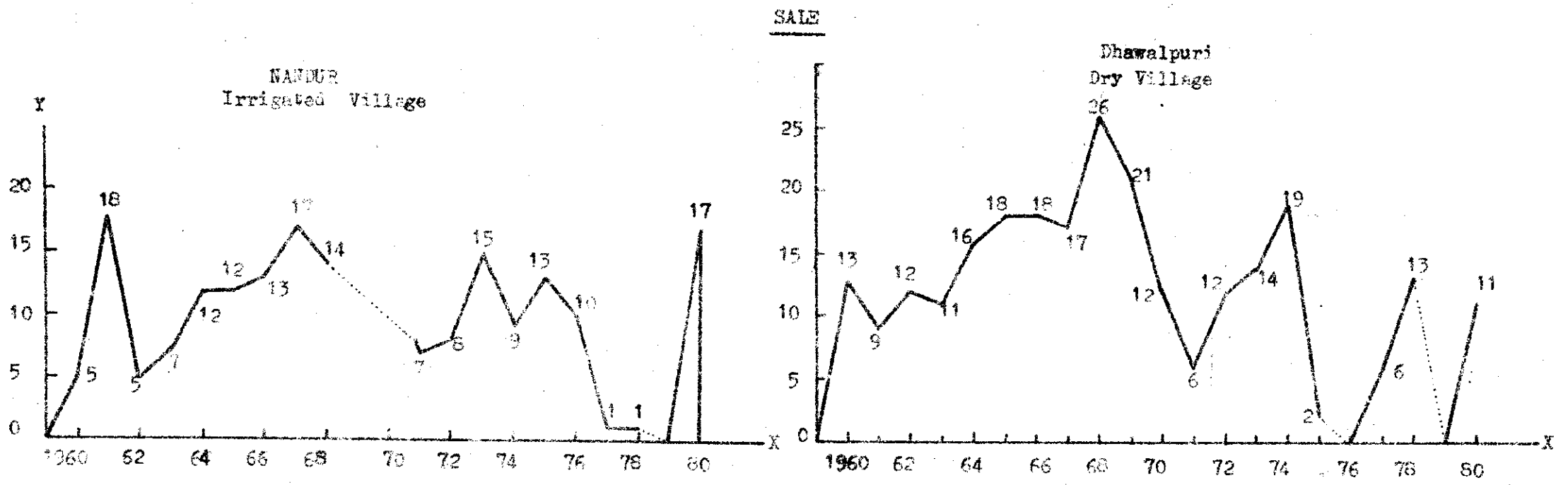
* Taluka is coterminus with Block in Maharashtra and in some other states. Generally a District has several talukas which in turn have blocks created during community development days.

Referring to Figure 2, we note the yearwise changes in sales and mortgage to banks in the dry and irrigated village. The years 1960-61, 1967-68, 1971-74, and 1979 were drought years in this part. The vulnerability of the irrigated and dry economies to the drought effect is bound to be different. However, the differences occur through processes which are distinctly different.

In Nandur, barring 1960-61, when sales were very high, the trend of increasing sales compares with that of Dhawalpuri till 1965-66. In 1967, the time when irrigation infrastructure in Nandur had started improving through tubewells etc., the peak sales were observed right during the drought year whereas in Dhawalpuri, it only got manifested in the next year i.e. 1968. This pattern was discernible in 1961 and 1962 also. However, in the drought of 1970s, the scenario was conspicuously reversed. The drought of 1972 was characterized as "not in 100 years"¹. In Nandur the canal supply of water had also started in 1972-73 (Kohler, 1981).

The Maharashtra Government had taken up massive public works programme like Employment Guarantee Scheme in 1972, which provided guarantee of employment to rural poor including small and marginal farmers, landless agricultural workers, and artisans (Singh, 1979). Due to prevailing drought, the programme acquired the character of massive relief programmes. One collector of a district reportedly said, 'I will provide employment to every available unemployed, even if it means breaking a mountain and creating another to again break it and so on ...'. The implication of referring to this phenomenon of drought here is that the absence of sudden peak in sales in 1972, 1973, or 1974 compared to sixties should be seen in this light. The relief

¹ Ladajinsky, op.cit., 1973.



delayed the marginalization process. Further even the bigger farmers did not have much to grow in completely dry villages and so presumably could not effect the purchases of land. In irrigated village the irrigation spreads had continued and even the good rainfall in 1974 or 1975 did not bring down the sales. In dry villages, farmers even today recall 1971 as much less rainfall than the current conditions because lot of work was available at that time.

The differences in stratification process in these two villages can be better appreciated when one looks at MB trends. The institutional intermediation is extremely poor and weak in the dry village while in the irrigated village it has reached in peak in 1967 and 1976, the years when sales are also highest. However, the M.B. peak is the highest in 1972 whereas the sales register the peak only in 1973.

- (i) The ability of large landlords to obtain institutional finance being high particularly in the year of stress has a direct on the incentives of compulsions for sale by smaller and medium farmers.
- (ii) The public works delay and elongate the stratification process which in turn affects the ability of farmers to stay on their lands for longer duration.
- (iii) The drought effects, over years, lead to different characteristics in dry and irrigated villages also because of exhaustion or near-exhaustion of investment opportunities in agriculture for the farmers. This might lead to accumulation of capital which can only be spent in either construction, marriages, or purchase of land. Sugarcane cultivation, the major irrigated crop in Nandur, even otherwise is an extremely remunerative one. In drought year, only 10 per cent area under sugarcane was adversely affected where as in other crops loss was 80-90 per cent or even total (Kohler, 1981).

Several other features of an irrigated village economy help us further to understand the relationships of the above processes with staying on process.

With increasing labour demand seasonally in irrigated villages which do not have sufficient labour supply locally, any contract relationships have gained strength. One is saledari (annual contract labour), another is the appointment of cane cutting contractors by sugar cane factories and the third is the direct contracting by the farmers. The process in Sugarcane economy has some interesting similarities with early years of cane cultivation in Australia where contracting had led to large scale in-migration. In the sugarcane belt in this district of western Maharashtra also, lot of labourers come from the adjoining dry region called as Marathwada. When we went into the question as to why local labourers from the dry villages did not occupy the place which the labourers from marathwada did, several interesting answer emerged such as:

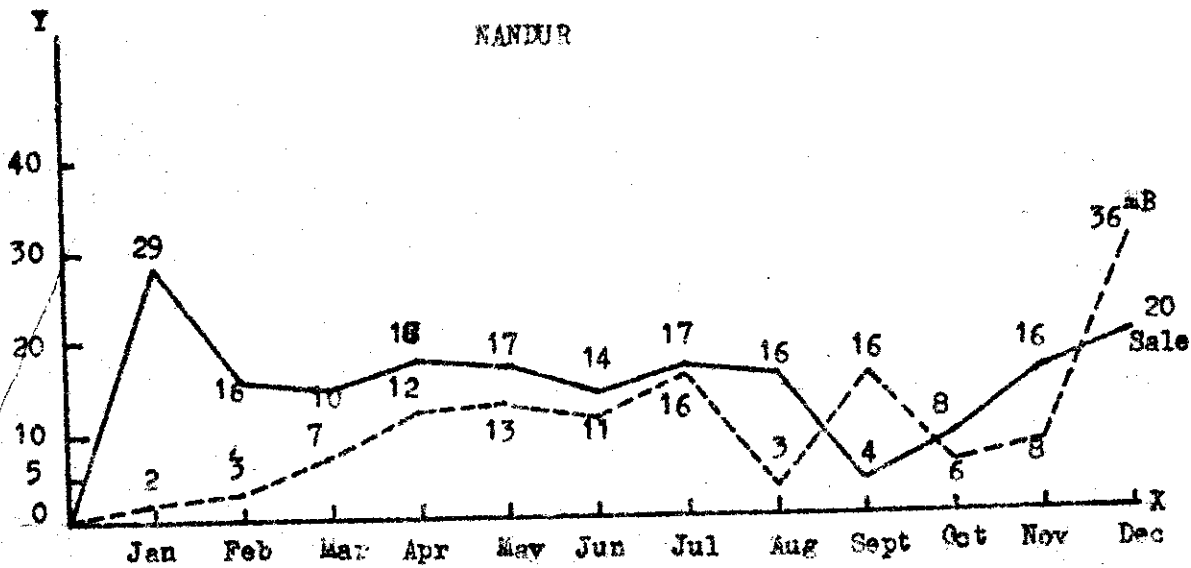
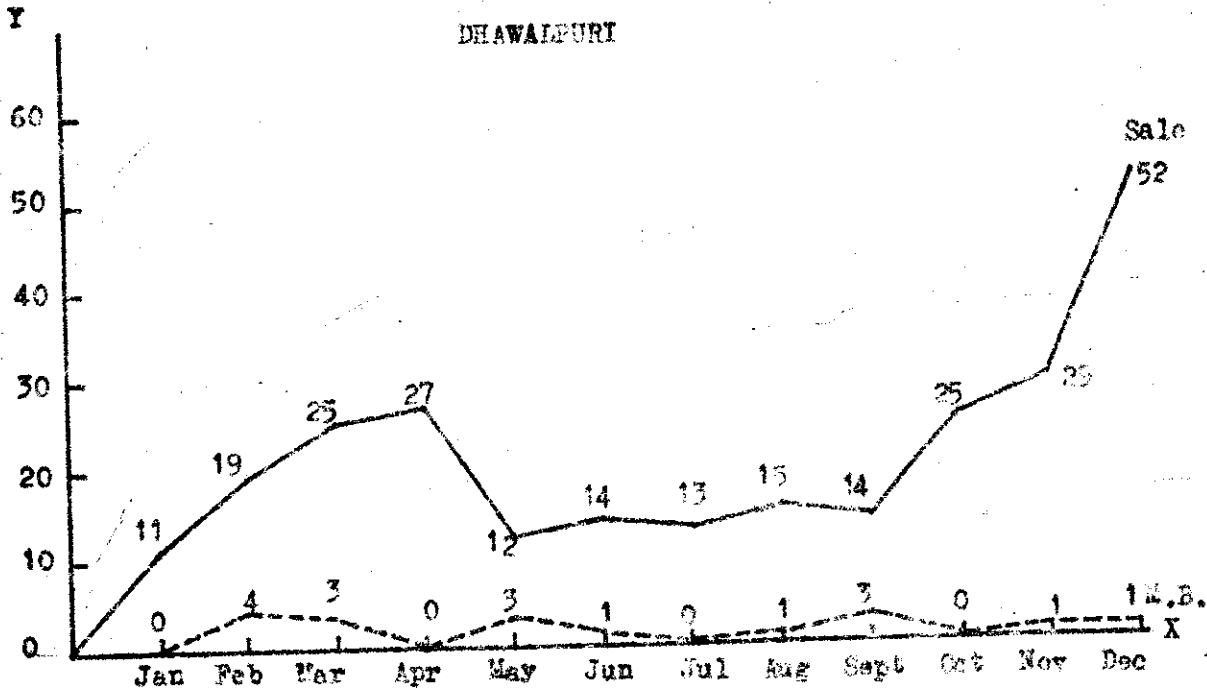
- a) "The work requires staying in field in tents for several months which as (the native of dry part of this district) can't do as well as the in-migrants can do".
- b) "The work requires very hard labour and we don't have strength to do it"(the historical malnutrition one might hypothesize in this dry region might be more as the region is chronically drought prone and so has impaired their ability to work).
- c) "The time when cane-cutting work is available, we have work available in our own villages also. Because the employers provide us debts and grains whenever we require, we find working at their farms better (though not necessarily remunerative).

- d) "The cane growers also welcome outside labour, which is easy to manage and which can be got cheap".

In addition to the above factors, the saledari system provides means to an employer to ensure a minimum supply of labour. If he is in need of excess labour he can pick up from casual labour market. The availability of saledari increases the bargaining capacity of the employer for wages with casual labourers because he can delay the operations marginally at least in cases where the casual labourers desire work urgently. The preference of a labourer for saledari could be understood from the element of certainty it provide compared to the task of trying for job every now and then. The saledari in practice does not mean contract for only one year. Many times a labourer continues with the same employer. When debt burden forces his continuance, one could call it "bonded labour", but in other cases, the labourer does have the option of changing his employer.

Seasonality :

We will now look at the seasonality aspects of stratifications in both dry and irrigated villages. For all the observations covered under stratification we could not compile the ~~seasonality~~ details and thus the explanation of seasonality is only partial. Despite this limitation of data, one notes that in irrigated village Nandur (Figure 3) barring September, October, and March, in all the other months the transactions have taken place in good number with the peak being in December-January, the time when dry land farmers are most hard pressed and irrigated land farmers receive sugar cane revenues. (Figure 3).



In the dry village, the peaks are most distinct in the months of March, April, and October, November and December. The pattern is akin to the one witnessed in Haryana villages also. These months are harvest times, March-April for winter crops, and November-December for sugarcane (the crop grown by minority farmers who irrigated in dry villages). Festivals, marriage and other ceremonial activities are also concentrated in these months further impairing the ability of the farmer to postpone the transfer. The MS in irrigated village touches the peak in the December while sales does so in January hinting at some relationship between liquidity advantage gained through financial intermediation and the stratification process.

As is expected, the land sales became more pronounced between October-January, the period when sugarcane farmers have the surplus cash flow. Further evidence about irrigation leading to differentiation is presented in Table 2. Although some studies (Kohler, 1980, Gupta, 1980) earlier had shown that differentiation is much more sharper in irrigated villages, the relationship between seller-buyer had not been looked into hitherto from the point of view of extent of irrigation on sellers' land.

It can be seen from Table 2 which presents data on this aspect from 12 dry villages where 206 farmers were personally contacted randomly that the majority of the sellers have been the dry farmers. In some village all the sellers have been dry farmers where as in other majority have been so. As much as 89 per cent sales were reported from farmers who had less than 50 per cent area under irrigation. About 70 per cent transfers was from people having less than 20 per cent irrigation and a little less than 50 per cent (41%) transfers was from totally dry farmers.

Table 2

DRY-VILLAGES (WEST MAHARASHTRA)

	Ganjibhoyre	Varandi	Kanhur	Bhondre	Mahalsgaon	Gowdevadi	Kutevadi	Sutarvadi	Goragan	Kundevadi	Mukolhole	Paroli	Total	%
0%	2	4	9	3	1	-	1	8	27	3	1	24	83	40.30
10%	3	-	1	2	-	6	5	-	-	-	4	3	24	11.70
20%	2	-	-	1	-	2	2	4	1	-	1	19	32	15.50
30%	4	-	1	2	-	-	-	-	-	1	1	11	20	9.70
40%	2	-	-	-	-	-	-	-	1	-	1	4	8	3.90
50%	2	-	1	-	-	-	-	1	-	-	3	5	11	5.30
75%	3	-	-	-	-	-	-	-	-	2	2	4	11	5.30
90%	1	-	-	-	-	-	-	-	4	-	-	-	1	0.45
100%	2	-	-	1	-	-	-	-	-	-	8	1	16	7.77
Total	21	4	12	9	1	8	8	12	33	6	21	71	206	100

* Irrig.%

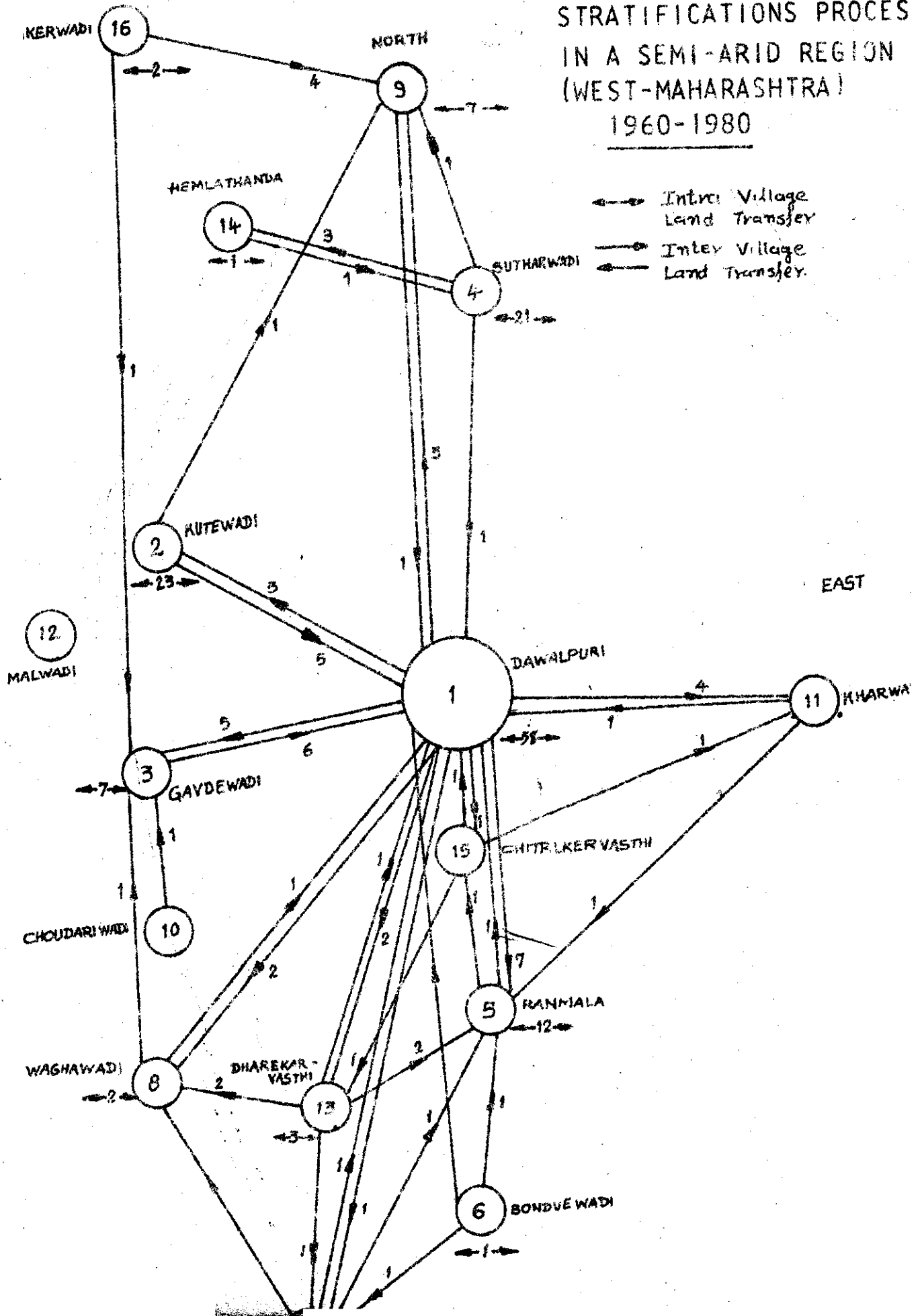
* Percentage of Irrigation in Seller's land in different dry villages (Sample 1960-80).

The seasonality, as discussed earlier becomes much more serious in dry villages where hardships increase in the rainy season when land also cannot be sold.

At the spatial level, the map of Dhawalpuri along with its 16 hamlets (Fig.4) depicts the process of capital accumulation in the given ecological context amongst different settlement units. Irrigation is restricted to a few villages like Dhawalpuri, Sutharwadi, Kutawadi, Ranmala etc., and even in these villages the spread of water is very limited. Most of the region towards north of Dhawalpuri is undulated with soils being extremely poor in quality. Towards south the region is comparatively more plain but even here the soils are of poor quality. Dhawalpuri is the village where most of the marwari (a business community from Rajasthan) banias (the traders) reside and do money lending, and trading in grains, cloth, and other provisions. The most important information that one gets from this map is the movement of land ownership. It is also evident from the map how a village (Dhawalpuri) which is big, having most of the facilities private and public (in growth centrist language - a growth foci or service centre, etc.) acts as the suction-pump of capital draining resources through usurious rates of interest on lending as well as through purchase of land by non-cultivating class. Detailed characteristics of various settlements will be presented elsewhere. However, it may be worthwhile to mention some of the lessons one can draw from this and some related evidence collected separately.

(1) Those who have faith in trickle-down i.e., the Growth Centre oriented regional planners, and who believe that migration can be checked by developing small towns or big villages essentially imply, as the figure shows, that they would like to strengthen the stratification process first, followed by

FIG. 4
 STRATIFICATIONS PROCES
 IN A SEMI-ARID REGION
 (WEST-MAHARASHTRA)
 1960-1980



marginalization of peasantry and then avenues for its absorption in employment opportunities would be generated through off-farm investments.

(2) The trickle-up of resources, making even cultivation less efficient, (because owners would be far off from their land and would require tenants or labourers) with very little cottage industry in the biggest villages sound some very different signals. In fact as we would show a little later, the off-farm employment like sisal processing, blanket weaving, sheep and goat rearing etc., are much more pronounced in small hamlets than the bigger villages. The more marginal villages like Sutharwadi have much more sheep, goats, weavers, etc., than the villages near Dhawalpuri.

(3) Historically, it appears that the process of land transfers has been pushing the pastoral communities in dry regions into more and more marginal regions. This leads to over-exploitation of grazing lands which after some time cannot withstand the pressure of existing livestock. The implications are that either the herd size should be reduced or long distance grazing should be resorted to. Many farmers unable to find this process remunerative quit.

(4) From some of the villages like Hamalathanda, Patharwadi, Thakerwadi, majority of the families migrate for 6-8 months to Konkan (Ratnagiri district) region of Maharashtra for working as labourers for charcoal making. The studies showed that the pressures of this migration seasonally have started differentiating these communities. Some of them have started acting as procurers of labour for coal merchants in Konkan and through labour-credit links depress the wage rates. Some farmers who go to Konkan to earn whatever little, have to pay this amount to the lender-cum-labour contractor in Hemalathanda. On balance migration seemed to be making them poorer because

many of these farmers have to spend their savings in buying bullocks for use in Konkan which they do not take to their villages because of chronic drought conditions. In case of death of bullocks, the loss is theirs. And losses are quite frequent.

(5) The investment in lift irrigation taken up by many voluntary agencies as well as banks so far has been geared towards these progressive migrants (the early adopters who have now become labour contractors) rather than towards the poor, small land holding threshold cases (the farmers who might eventually quit and start moving towards cities like Ahmednagar, Poona or Bombay). The elitist bias of this rural developmental strategy does not check migration and cannot compensate for the urban bias of other policies.

In the next part we will present some data from various caselets developed through discussion with migrants, their family members and those who were on the threshold of immiserization. Some returnees were also contacted. It may be mentioned that in this case also, the process of stratification being so distinctly different within a village and its hamlets (many of which are caste-clusters), there was a necessity for reappraising various research approaches to the problem of rural population retention adopted so far.

PART IV

The view from below and outside : The Perception of People who move

We began this paper with the objective of documenting the process through which people stay on in their lands. To understand this, it would be worthwhile to have a look at the context of some who moved, came back occasionally or for good. Most of the illustrations are from Western-Maharashtra regions. We will briefly document some of the illustrative cases of seasonal migration and permanent migration and then try to conceptualize the framework in which further enquiries in this area are needed to be directed at.

Seasonal Migration

The following reasons emerged as important determinants of seasonal movements of rural, rural-rural, and rural-urban types.

1. Brick making

The entire family migrates from a dry village (Sanjibhoyre) to Bombay for six months in the month of October and returns in the month of March. They own three acres of dry land which they can cultivate if rainfall is good. The work at brick kiln requires preparing the soil slurry in the night, puddling it before the sun rises so that bricks can get exposed to maximum sunlight for drying purposes. Even the small children in this family of 14 persons participate in the work and education is ruled out for most of them. The savings from this work have helped them to tide over the period during rainy season in their village even if they do not have any crops. Brick making is seasonal and they do not find opportunities to work in Bombay in the remaining period of the year.

Another person owning five acres of land went out for this work in 1975 when his conditions were very bad and came back in 1977 when the rainfall was good. A landless person from another village goes along with the entire family for brick making and finds that a family of two persons cannot earn sufficient to manage expenses in the remaining months when they come back. His wife does some house hold work to support the family in the off-season.

2. Charcoal Making

Many farmers from Patharwadi, Sutharwadi, etc., as mentioned earlier, go to Konkan region for working as labourers in the process of charcoal making. Many of them have to borrow money at a very high rate of interest from the contractors before they migrate or soon after they reach Konkan and this money is deducted by the Money-lender-cum-contractor from their salary. Another family of seven persons owning 10 acres of dry land go for the same work leaving two members behind to take care of cultivation in case it rains. They are able to save about Rs.1,000 to 1,100 after working for six months. Even the women, including unmarried girls, go to Konkan for charcoal making. Many others, who, despite having land are not prepared to bear the risk of failure of rains and thus prefer to have some income through seasonal migration for charcoal making, rather than staying behind and gamble for an income which if it rains could certainly be larger than what they get through the migration.

At least in this case, it appears that migrants are risk averters, rather than risk takers. Risk taking, therefore, should not be considered as an essential characteristic of the migrants although in some cases the pay-off from migration may be decisively higher than the returns from investment on land. However, the fact that many large land holders also migrate raises the need for further exploration.

Permanent Migration

1. Partial Family Migration

A family of eight members with six acres of dry land and two acres of seasonally irrigated land sent one member in 1977 to Bombay. The eldest and the youngest brothers have remained behind in the village; the parents are very old and one of the brothers who had gone to Bombay, has learnt radio repairing work, and sends about Rs. 50-100 now and then. His brothers in village earn through bullock cart hiring.

Another person leased out five acres of his land in 1960 for which he gets about 1/3 share before out-migrating. The other family members still do manual labour in the village. He sells flowers in the city and sends about Rs. 50-75 per month. He goes to his village only once in six months.

A landless person from the village Panoli went in 1968 to Bombay and works as way-side barber. He earns about Rs.300-400 in a month and visits the village once in a year.

Migrant Entrepreneur

This person had 12 acres of land in 1975 in Ralegaon which was dry. He used to work as an annual contract labourer for some years. He sold off his entire land five years ago and bought some irrigated land in Shirigonda Taluka in the same district. With the help of some relatives he took up a fertilizer distribution agency and also a loan from a bank. However, he could not repay the loan because of failure in business, and the bank forced him to sell the land. He is now landless and is working again as a contract labourer along with his wife and children in his own village.

3. Landless Migrants

Some people sold their land in 1976 and 1978 and went to Bombay to work as coolies or hand-cart pullers. Some of them left their family behind and sent some money to them for meeting their expenses. In one case the wife works as domestic help and her husband works as a coolie in the dockyard in the city.

In three cases, they migrated when they found work availability extremely less. In all the three cases some contacts in Bombay motivated them to move in the first place. Out of another 3.4 persons who left much earlier than the ones mentioned, only one person had changed his job and had gone from Bombay to Ahmedabad. The rest of them continued to stay in the same work. In all the cases they came to the village once in a year either because they had left their family members behind or because they had left their family members behind or because they had some relatives or they had to attend some functions.

4. Migrated after leasing out land

About 11 persons in different villages having land ranging from 1.2 acres to six acres had leased out their lands and left for different cities largely on account of increased debts and unavailability of work. In some cases the family members have remained behind to work on public works whenever they are available to earn some income to manage their expenses. In one case, a farmer left because he had borrowed money for the marriage of his daughter. The land was leased out to the moneylender and he had to dispose off the land that he had in the village. He worked as a construction worker and moved from one place to another within the district.

In another case, the young sons of an old couple left the family to work in different places. They did not send any money back. The old house in which the couple lived fell down recently and to manage their expenses they had to sell the land of the house-site also. They rented a hut for about Rs. 10 per month and worked as labourers to manage some income which was hardly sufficient for a meal.

5. Migration because of un-availability of agricultural implements, bullocks etc.

A farmer owning six acres of land sold it in 1975 because he did not have any bullock or implements to cultivate it. From the sale proceeds of this land, he had bought dry land in a nearby village which also did not yield much income due to drought and he disposed off that too. Currently he is working as a contract labourer along with the entire family.

In this case, there were two brothers who had three acres of land each and they had two donkeys which carried mud. After some time, work was not available and the land they had did not yield much, with the result one brother left for work in an irrigated taluka. Now both of them have left and have leased out their land to some other person. Their parents and children still live in the same village.

Another person found that even with 12 ~~acres~~ acres of dry land it was not possible to make both ends meet. He did not have bullocks also. The entire family worked as cane cutters near Satara town. Their land was leased out from which they got Rs.1000 income in a year. In many cases, it had become difficult to rear livestock as the grazing land was owned by the forest department and farmers had left the village and migrated out. In some cases, bullocks were lost in 1972 drought and the debt incurred in the process

had prevented them from buying them back. The farmers found leaving their land fallow and working on public works for some months more attractive. In the remaining months they went out and did some casual work. In one case the farmer had taken a loan for grains at the rate of 60 per cent annum because of which he had to commit for seasonal migration with the labour contractor.

Some of the persons had to come back because either the factory in which they worked closed down or because they incurred heavy debts due to sickness and other adjustment problems.

In some villages it was said that during the early years when industrialization was picking up, the industrialists used to send their agents to the villages to hire people for work in the factories. However, since then many of them had taken to automation leading to heavy retrenchment and several of such persons could not find work in other industries also and had to come back to the village to work as labourers.

Not a single returned migrant we interviewed had been able to either bring new skills or savings for investment in land or non-farm activities. This is not to suggest that the returned migrants cannot be considered to perform these two functions, but the point is that the weightage given to this aspect of migration in literature appears to be comparatively much more than the reality would demand, at least on the basis of experience from West Maharashtra. On the other hand, most sugarcane growers educate their children who would subsequently get employed in urban services. This between farmer elite and bureaucracy appeared to be extremely important in providing them information and advantage as well as the necessary contracts

for getting specialized inputs or services. In particular case of institutional finance the nexus seemed to be extremely effective in expediting the flow of credit to the better off regions. Though these regions would have attracted the investments even otherwise the nexus seemed to facilitate the flow.

It would be worthwhile to mention here about the migrant communities like Dhangars who were facing excessive economic pressure on account of the so called developmental interventions. The ecological changes on account of excessive deforestation are leading to changes in the enterprise risk that can be sustained in any region. To cite an example, in case of Western Maharashtra, it was found out that gavali a one of the major pastoral communities was expected to pass through "the stages of buffalo-keepers to cattle keep to goat herd and shifting cultivation to landless labourers with progressive decline of vegetation and soil fertility if present trend continued (Gadgil, and Malhotra, 1979). No doubt that many of these landless persons will be ultimately forced to migrate out.

In another study, it was found out that massive efforts in promoting cattle rearing under Operation Flood - II (a programme aided internationally to increase the supply of milk to metropolitan dwellers) in semi-arid and arid regions were disturbing the ecological balance. The sheep, it is known cannot eat grasses taller than 6-8" while cattle can eat grasses even shorter than 6-8". In a region where pastures remain constant (or even deteriorate) and cattle population increases, the share of sheepstock goes down. Eventually the sheep owners have to move into more marginal and farther regions straining their economy. Many of them finding the occupation unremunerative quit and join the ranks of migrants (Gupta, 1981). The point being made is that we should

not look at the problem of rural population retention merely from the point of view of differential in the employment opportunities in 'pushing' and 'pulling' regions. The socio-ecological processes that influence these opportunities need a deeper analysis.

Studies in Maharashtra have also shown that many non-farm employment activities like sisal processing for ropes and other articles, using sal-bark for tanning of leather, blanket-weaving etc., which traditionally provided support to farmers and labourers have been under terrible pressure. The sisal fibre has very good market in Calcutta from where traders come to buy the fibres but owing to extremely unorganized nature of this craft activity, the middlemen have been exploiting the petty craftsmen.

Incidentally those who process sisal are not the ones who grow it. Farmers generally grow it as a fencing plant for protecting fields from stray animals. The landless harijans and tribals usually buy some plants which they cut, soak in water and beat it to take out the fibre. Owing to primitive technology, most people can neither afford scissors for cutting the plant nor can save their hands from bleeding while holding it before cutting. During processing also, the blisters on the hand of labourers often lead to infections which sometimes assumes serious proportions leading to avoidable expenditure. The income from the fibres is shared in 1:1 proportion between the farmers and the cutters. Despite the fact that this activity can involve women, old, and infirm people also in making ropes, straps etc, there is no organized marketing.

The introduction of synthetic ropes has further affected the local demand for sisal ropes. Likewise in the case of sal-bark which is used in leather tanning, the collectors (mostly tribals) get very little despite the fact that it commands high prices in Bombay markets.

The competition with synthetics and exploitation by middlemen are pushing many people out of this occupation making the staying-on process extremely difficult.

As we will discuss in the last part, these activities deserve serious attention if the efforts for enabling people to stay-on in rural regions have to be seriously made.

In the next section, we will present the partial framework in which future explorations in this field could be made. We call it 'partial' because the tentative evidence presented in this paper would not justify a more definitive statement, although we must mention that in most studies reviewed by us much broader generalizations have been drawn from a much less rigorous analysis. The perceptions about people who migrate mentioned in this part, have been presented just to highlight some of the softer aspects of our study which still is going on.

PART-IV

Framework for Further Explorations

So far, in this paper we have discussed the way seasonality influences the stratification process which in turn is influenced considerably by the ecological conditions, level of endowment like irrigation, extent of formal financial intermediation (particularly for medium to long term investments in mechanization and irrigation) and the access of various sections of society to natural resources like grazing land or pastures etc. We have also shown the patterns of this process which are particularly manifested differently in drought years in dry and irrigated villages. The relationship between seasonality, stratification and staying on process has been traced through various linkages between credit, product and labour markets. The role of public works, non-farm employment opportunities and restoration of ecological balance helping in sustaining traditional mode of living by the threshold population (the people on the verge of quitting) in marginal semi-arid regions has also been briefly discussed.

We will now try to present the conceptual framework in which the tentative evidence presented in this paper can be organized so that future explorations to understand staying on process do not end up by merely stating that 'push' and 'pull' factors operate. The understanding so gained will also help us in reviewing the policy options that have been suggested so far to help in the retention of population in rural areas.

Intrepenetration of Credit - Product and Labour Markets

We have described elsewhere (Gupta, 1981) why any intervention in one market cannot be appraised in isolation of other markets in semi-arid regions. The basic premise is that due to interpenetrating factor and product markets, options of a small farmer household in one market say product, are considerably influenced by the constraints that the farmer faces in the credit or labour market. This view is illustrated in Figure 5 (in appendix) where it is shown how a household quits on finding so much deficit in the budget that can neither be met through further asset disposal or investment in land or other enterprises, or by borrowing, or contracting labour to source of credit or inputs. In the intervening period, sickness and malnutrition might have further reduced the ability of the farmer or the labourer to be gainfully employed locally.

However we realize that this framework does not offer sufficient explanation of various processes that simultaneously operate while a household may decide to migrate. Also, the historicity of loss or debt accumulation in drought prone economy is not fully captured by this framework. However it helps us in seeing the way institutional inflexibility, particularly when an enterprise fails on account of drought or otherwise, leads a farmer to seek nursing finance from traders, moneylenders, big farmers etc., who in return might constrain the decision making options of small farmers severely.

We present now an alternative framework in which the seasonality, stratification, and staying on processes can be better appreciated (Fig. 6).

However a few clarifications are in order here (a) In many cases, the assets created through these works so far have not been such as to reduce the risks of deficit farmers through improvement in land or soil conservation etc (b) Whenever the so called community assets were created such as community wells dug on the land of big farmers by labourers and farmers working under public work scheme, their ownership was not vested with the labourer. Recently Maharashtra government transferred these wells back to owners of land who had initially donated that piece of land (c) These works help big farmers also because the labour force which otherwise would have migrated out is retained in the region.

Often at the first sight of rains these works are stopped. The farmers are under heavy stress during this period as no work will be available for sometime. During this period informal borrowing increases although disposal of asset is also reduced because of several factors (d) Distribution of the foodgrains through public works helps in checking the price differential between interior and not-so-interior rural regions and urban areas (e) The wage rates at public works are kept extremely low during drought so that only those who have no other options come. But during other times, even if rates are high, they only marginally influence the wage rate in labour market because of their seasonal and short term character. These works are often stopped when demand for labour reaches a peak at irrigated or big farmers' farms. The big farmers even managed to scuttle the public works when the labour supply problem becomes acute. These works with low wages attract more labour because the strain required here is lesser compared to the work on land.

So far works like soil conservation, afforestation, bunding, water harvesting structures, etc., have not been given any priority while designing public works with the result that ecological imbalances are not being progressively reduced. These works are being found more and more inadequate looking at the increasing labour work force.

The overall food surpluses which initially had triggered the food for Work programme are also not available any more. The governmental commitment towards this policy is thus becoming weak.

Summing-up

The ecological changes have been seriously neglected in migration literature. This has been characterized as "an unforgivable oversight in a land of alternating monsoon and drought" (IDRC - 756c, 1977). The literature on population growth has often blamed poor people for having larger family size than (in their view) the soil can carry or society can afford to feed. However the evidence is extremely in-sufficient. We found during our studies in Haryana that while higher castes, who were also richer, children numbering up to ten, not a single harijan family in the studied village had more than four children. It seemed that as one came down the caste ladder, the family size went on decreasing.

Our submission is that several factors influence the staying on process. Because the researchers have usually concentrated their enquiries on only one or two aspects, they have tried to explain the entire variance in effect through measured variables. There is a definite need for a socio-ecological perspective for studying the staying on processes in drought prone regions. Migration does not necessarily benefit all the migrants. For many, it is a

decision taken as a last resort. We have argued in this paper how public interventions ought to take into account sensitive and fragile economy of deficit households from seasonal and stratification angles, if staying on process has to be strengthened.

It is hoped that this paper will provoke more comprehensive statements on this problem which will help in analysing why a few people move as well as why many people do not move.

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Epilogue

After this note had been developed, certain interim comments were received which are being followed up in the next phase of this work. Part of the data reported in this paper as well as being collected now forms the part of an ongoing CMA Project on Small farmer Household Economy in Semi-arid regions. Reasonwise list of land transfers is being followed up further to enquire into following questions:

1. What are the characteristics of buyers of the land, why did they buy and how? Is it true that their effective access to formal credit system has played a major (or some) role?
2. What does a seller normally do? i.e. does he dispose off inferior plot first and fertile plot later or vice-versa?
3. What was the landholding of father and grandfather of seller? What has been the pattern of landholding diminution over generations?
4. Whether the process of stratification had peculiarities specific to ecological setting of the settlement?
5. What were credit, tenancy, trading and other relations between sellers and buyers?
6. To what extent the transfers were intra and inter class? (from some tentative evidence collected so far not all transfers were from small to big farmers.)
7. What has been the bearing of technological changes on this process? It appears that (atleast in one village the evidence was quite striking) in seventies, in contrast to sixties the seasonality of transfers has been considerably smoothened.

To study the seasonal aspects of stratification further efforts would be made to capture the exact year in which the monthly trends show a basic shift. This has implications for investment in seasonal irrigation which may provide extra cash to wet farmers just when dry farmers is most short of cash. At the same time absence of simultaneous interventions in Dry-farming or Non-farm sector increases the vulnerability of dry farmers.

8. The bearing of drought on the process of stratification as hypothesised in this paper will also be further explored.

While some data from Ahmednagar (as a part of SDC/ARDC study on Rural Banking) and Mahendragarh(as part of SFHH Economy project) has already been collected, some more data on stratification, migration etc. will have to be collected to further our understanding of the complexity of constraining semi-arid environment.

Critical comments, suggestion and modification in the draft as well as proposed line of enquiry are most welcome. Ultimately this exploration should answer the question "Is land market frozen? and if not, what are its implication for devising developmental alternatives for small farmers in drought prone regions.

AppendixReasonwise list of Land Transfers

Reasons	Unirrigated land	Irrigated land	Total
1. To repay the informal loan	18	15	33
2. For Marriage (of son's, daughters etc.)	15	14	29
3. Sickness	17	4	21
4. To repay the Bank loan	13	21	34
5. For consumption - domestic	18	8	26
6. Poor, infertile land	8	5	13
7. Sale of dry land to purchase irrigated land	6	4	10
8. To generate money for irrigation	3	2	5
9. Land taken away by deception	1	-	1
10. To start business/cottage industry	6	-	6
11. Field situated far off	6	-	6
12. Education	2	5	7
13. Due to drought	2	1	3
14. Litigation	6	2	8
15. For house construction	-	2	2
16. To buy land elsewhere	1	-	1
17. To release the mortgage (from bank etc.)	4	1	5
18. To purchase cattle	2	-	2
19. Land sold to the Mortgager	5	-	5
20. No inheritance or no heir	3	1	4
21. Unable to cultivate personally	1	-	1
22. Employment outside	4	1	5
23. Lack of implements & bullocks etc.	6	1	7
24. Sold due to drinking habit	5	2	7
25. To repay credit society's loan	1	1	2

Reasons	Unirrigated land	Irrigated land	Total
26. To contest election	1	-	1
27. Due to division of land	3	3	6
8. To release mortgaged bullocks	4	1	5
9. For purchase of oil engine/ construction of well to irrigate the rest of the land	-	5	5
10. Gift	-	1	1
11. To level the land	-	4	4
	<u>40</u>	<u>105</u>	<u>145</u>