CHAPTER - 4

HUMAN RESOURCES: QUANTITATIVE DIMENSION

Quantitative and qualitative dimensions are the basic aspects of human resources. They are also called the aspects of demographic structure and play a vital role in the development of a region. The scale of utilization of human resources depends primarily upon the constituent parts of these two demographic aspects. They also influence the utilization of physical and cultural resources.

Quantitative and qualitative are two terms qualifying for different meanings. The former stands for size, magnitude, dimension, amount, sum, etc., that can be measured directly in number and weight and lend to statistical treatment. Mehta (1976, p.9) also includes composition and distribution of population and labour force, the number of hours worked, the output and earning per head etc., as the quantitative aspects. The term qualitative, on the other hand, stands for nature, capacity, ability, knowledge, skill, mental or moral attribute, trait, aptitude, value,

motivation and other characteristics of man that can not be measured in terms of number or weight and do not, therefore, lend themselves as easily to statistical treatment as quantitative characteristics. In this way quantity is measured directly in terms of number and quality is measured in terms of grade or level of the characteristics.

The concept of human resources includes both the quantity and quality of the people inhabiting the area, and human resources, as referred to, earlier, are measured in terms of both the quantity and quality.

In fact the utilization and development of human resources depend primarily upon the characteristics of demographic structure and amenities available in the area. In the present context human resources have been divided into two — quantitative and qualitative dimensions, where, quantitative dimension will include distribution, density, age and sex composition, birth and death rates, growth of population and labour force participation rate, and qualitative dimension will include literate and educated people, labour quality of manpower in agricultural and non-agricultural activities. Some other qualities like health, life expectancy, technical training etc., may also be included in qualitative dimension.

Here we shall deal with the quantitative, dimension, and the qualitative dimension will be discussed in the chapter following.

Distribution of Population :

Distribution of population is very important part of quantitative dimension of human resources because the pattern of population distribution affects every aspect of the distribution of economic activities in a region . The pattern of regional development also depends upon the pattern of population distribution. The distributional pattern of population is the result of physical environment, type of economy and culture. These factors act differently and give rise to disparities in the pattern of distribution which ultimately cause unequal spatial development in a region.

Distribution of population directly reflects the pattern of influence of physical, social, economic, cultural and political development. It also indicates the quantitative value or appraisal of population but does not suggest at all the pattern of qualitative value or appraisal of human resources. Trewartha, Robinson and Hammond (1976, p. 528) have also stated that in the distribution of population "... . great

variety of skills, technological levels and educational accomplishments or of their contrasting capacities as producers and consumers ... ." are not taken into account. It is, therefore, difficult, by population, to get the spatial pattern of quality (human capital) which reflects and limits the establishment of economic activities.

Regarding distribution of population different scholars have used different terms such as dense, sparse, disperse, even, uneven, agglomeration, irregular, cluster etc., to show the pattern of population distribution. Chandna and Sidhu (1980, p. 17) state that the term distribution refers to the way the people are spaced over the earth's surface. "The people may be so spread as to yield a linear or dispersed or agglomerated pattern of population distribution".

The map of population distribution (Fig. 4.1) vividly exhibits the distributional pattern of population in Dhanarua Block. The type and pattern of settlements reflect the pattern of population distribution in the study area.

Looking into the population map (Fig. 4.1) it appears that the population is distributed in a

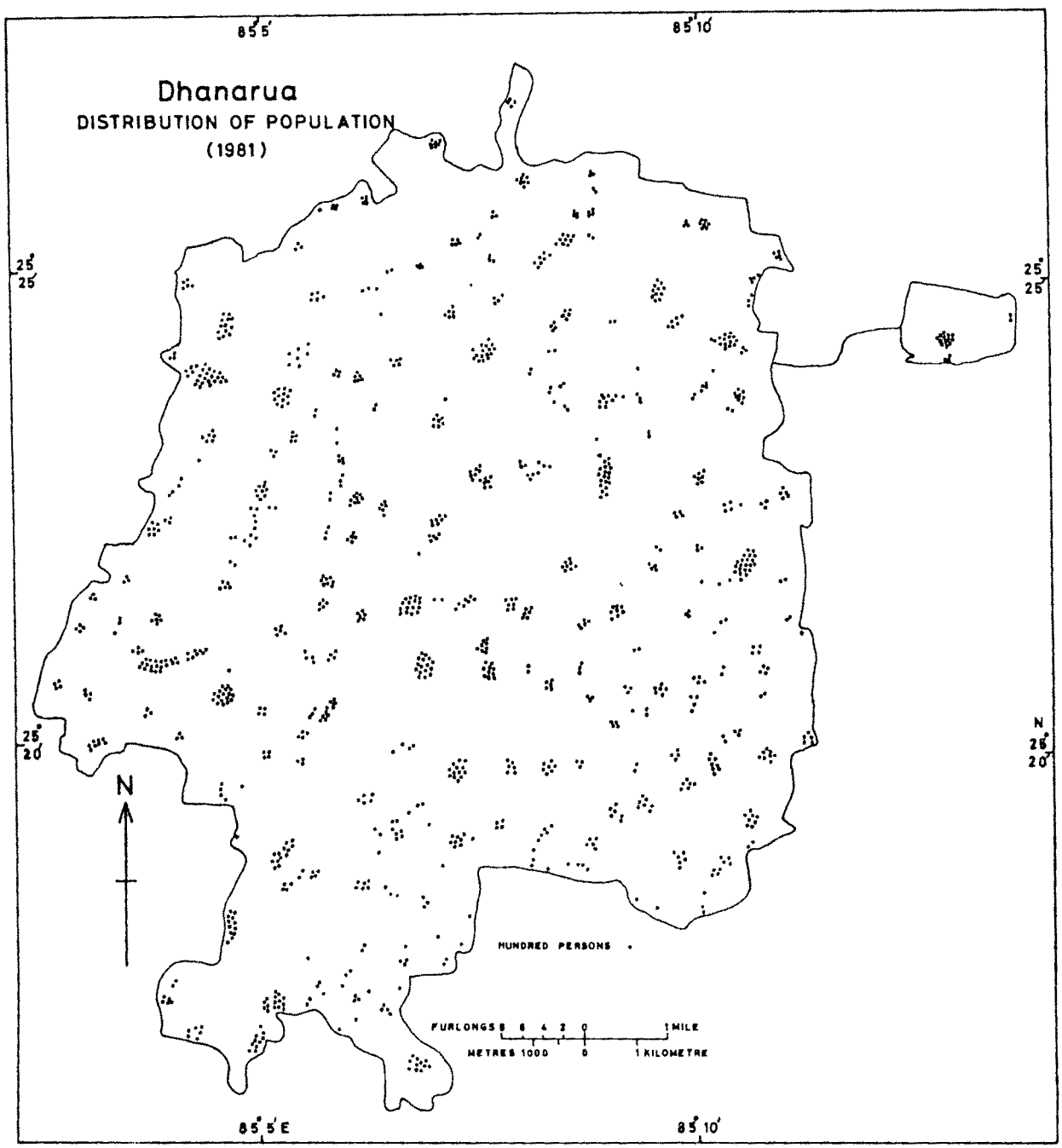
Dhanarua
DISTRIBUTION OF POPULATION
(1981)
85°5'
85°10'
25°25'
25°20'
N
HUNDRED PERSONS
FURLONGS 8 6 4 2 0 1 MILE
METRES 1000 0 1 KILOMETRE
85°5'E
85°10'

Fig 4 1

linear pattern the general direction being from south - west to north - east. Another characteristic feature is that a majority of the big villages fall in the central south west - north - east zone with clustering of population. The linear belts of population distribution follow the direction of slope which guides the direction of flow of rain water and the streams. All the rivers of the area thus flow from south - west to north - east following the direction of slope and the settlements are located mostly along the levees, and along the slightly elevated interfluves to guard against frequent floods. This accounts for the linear settlement pattern. The larger number of big settlements with relatively greater intervening distances in the Central Zone is also a result of greater incidence of flood in this zone.

It is also clear, after superimposing the map of population distribution (Fig. 4.1) on the map of drainage (Fig. 3.4), that population is concentrated along the banks of rivers, to be specific, on the river levees. This is more clear along the banks of River Dardha where are located some of the biggest villages of the area. This may be because of the availability of river water, fertile soils along the banks

and above all, safty from flood on the higher levees.

In approximately, one-third of the area, in the south - eastern part, the population appears to be almost evenly distributed. The reason of this may be of uniformity of relative relief and less severely of floods from such minor river as Saima, Baldaha, Bhutahi and Kararuwa.

Size of Population :

Table - 4.1 shows that there were 15 villages (12.93 %) in the population size category of below 301. Map of villagewise distribution of population (Fig. 4.2) clearly shows that approximately 50 % of these villages are concentrated in southern most part, and others scattered in central, western, northern and north - eastern parts. Among the villages of this category ten (66.67 %) were cultivator dominated and five (33.33 %) agricultural labourer dominated.

The map clearly exhibits that all these villages are smaller in respect of their area as well.

Population size category 301 - 600 includes 31 villages (26.72 %), approximately 50%of which are concentrated in southern and south eastern parts of

the Block, others being scattered in central, western, northern and eastern parts. Of the villages of this category nearly 55 % are cultivator dominated. Areawise also these villages are slightly bigger than the villages of first category.

TABLE - 4.1

Size of Population

Population size	Number of villages	Percentage to total number of villages
< 301	15	12.93
301 - 600	31	26.72
601 -1000	31	26.72
1001 -1500	15	19.93
1501 -2000	12	10.35
> 2000	12	10.35
Total	116	100

Source : Census Report of 1981.

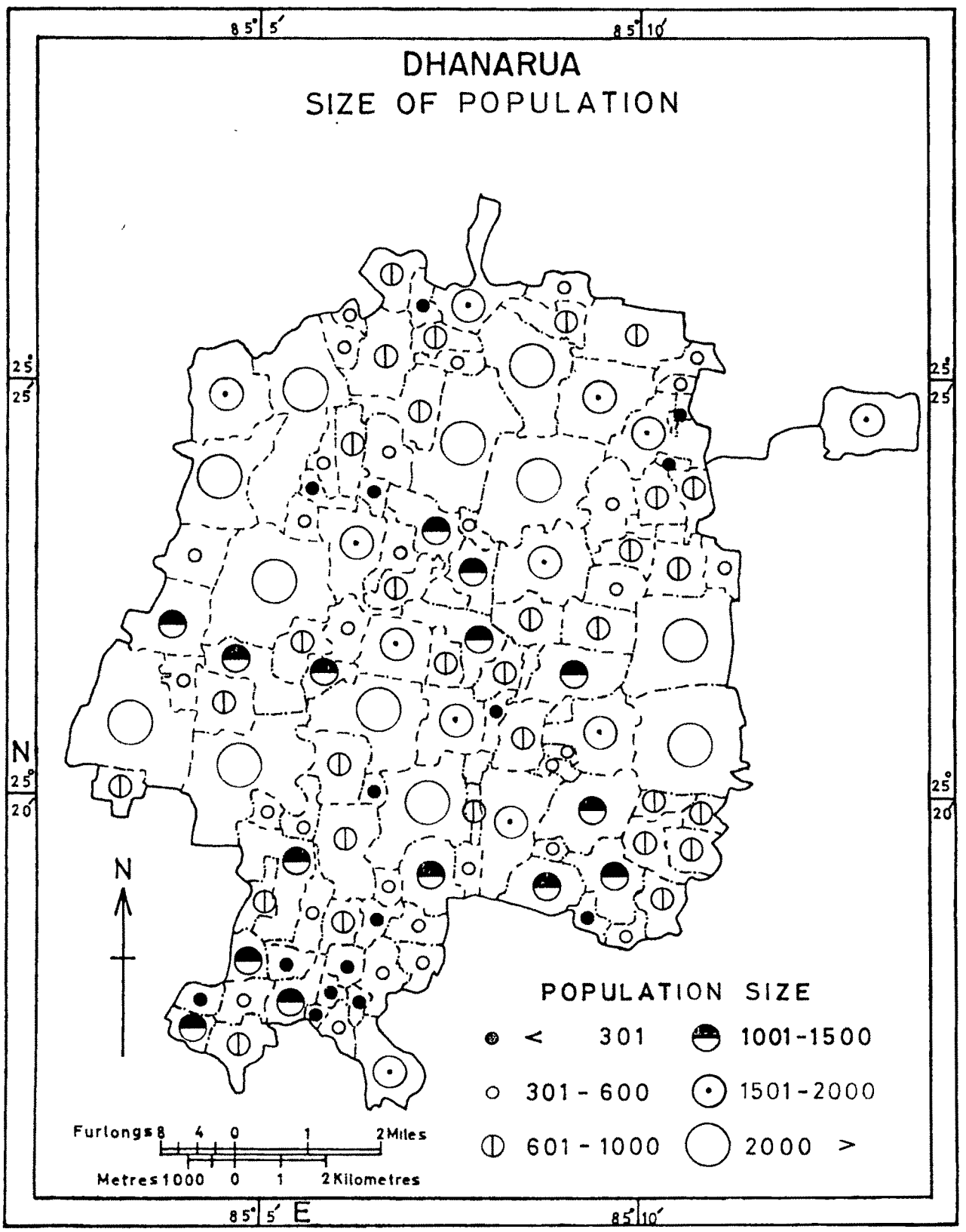
DHANARUA
SIZE OF POPULATION
85° 5′
85° 10′
25° 25′
25° 20′
N
N
POPULATION SIZE
< 301
301 - 600
601 - 1000
1001-1500
1501-2000
2000 >
Furlongs 8 4 0 1 2 Miles
Metres 1000 0 1 2 Kilometres
85° 5′ E
85° 10′

Fig. 4.2.

Population size category 601 - 1000 also includes 31 villages (26.72%). All these villages are clustered in some patches but in the western portion the number is small. In this category also nearly 65 % of the villages are cultivator dominated in which cultivator's labour force participation rate is higher than that of agricultural labourers. The sizes also, in terms of area, of these villages are slightly bigger than the size of the villages of the first two categories.

Population size category 1001 - 1500 comprises 15 villages (12.93 %). Most of these villages are located in southern, south - eastern and central portions of the Block, whereas they are absent in the northern, north - western and north - eastern portions. In this category also the cultivators are slightly more in number than agricultural labourers. The size of these villages in terms of area is slightly bigger than the villages of third category.

Population size category 1501 - 2000 comprises 12 villages (10.35 %). All these villages are scattered allover the area except in south - western portion. In this category also the proportion of cultivators is higher than agricultural labourers

since the number of cultivators dominated village is higher. The size of the villages, in terms of area is bigger than the villages of fourth category.

Last category of population size, that is, more than 2000 also comprises 12 villages (10.35 %). They are scattered almost all over the area except southern portion of the Block. 75 % of the total number of villages of this group are cultivator dominated and only 25 % agricultural labourer dominated. This category shows the largest size of the villages both in terms of area and population. The labour force participation rate of cultivators is highest in 75 % of the villages of this category.

From the above description it is observed and found that in each category the percentage of cultivator dominated villages is more than the percentage of agricultural labourer dominated villages which indicates that in each category of villages the percentage of labour force participation of cultivator is higher than those of agricultural labourer dominated ones, and that is why the percentage of cultivators to total utilized human resources in the Block is higher than that of agricultural labourers. On this basis Dhanarua Block can be called as a cultivator dominated Block in South

Bihar plain.

Secondly, the size in terms of population increases with the size in terms of area.

Thirdly, there is a concentration of smaller villages, both in terms of population and area, in the southern portion of the Block and they are cultivator dominated.

Density of Population :

Density of population is an engradient of quantitative dimension of human resources. It indicates the intensity of human resources in the area concerned. Besides, it also indicates the pressure of human resources on the economy of the area.

There are various types of densities depending on the methods of calculation (Chandna and Sidhu, 1980, pp. 17-18) such as arithmatic (total population divided by total area) which includes both the rural and urban population, rural density (total rural population divided by total rural area) which includes non-agricultural population also, agricultural density (total agricultural population divided by total cultivated land), physiological density (Total population divided by total cultivated land) etc.

Next density category ranges from 973 to 1277 persons per Km^2. Only nine villages (Ziaudin Chak, Mirzapur, Rarha, Nadpura, Atarpura, Nadwan, Nataul, Panditgang, and Nasaratpur) fall under this category and occupy 7.87 % of the total villages and account for 9.05 % of the total population. These nine villages are also scattered on the map and show the random pattern of population density.

Out of nine villages three are cultivator dominated and six agricultural labourer dominated. The reasons of higher density are the same as mentioned above.

Third category of population density ranges from the mean 669 to 973 persons per square kilometre. In this category the number of villages is 35 (Appendix 2-A) which covers 30.43 % of the total villages and 35.05 % of the total population. This category also does not constitute any one separate zone but shows scattering in haphazard way. However, most of such density villages are in the west, south, western and east central parts of the area.

Fourth category of population density ranges from 365 to 669 persons per square Kilometre and incorporates the largest number of villages. The total

number of villages belonging to this category (which is below average) is 54 (Appendix 2-A) and constitutes 46.96 % of the total villages and 48.09 % of the total population. This density area seems to form the background on the map on which other densities are scattered.

The last category of population density ranges from 65 to 365 persons per square kilometre. There are twelve villages (Deokli, Seodha, Gobindpur, Sikoha, Kewali, Barhampura, Kalianpur, Basaurhi, Lodipur, Bazidpur, Bara, and Baghbar) in this category and account for 10.43 % of the total number of villages and constitute 3.96 % of the total population. They are scattered in the northern quarter and southern part of the area.

Out of twelve villages six are cultivator dominated and six agricultural labourer dominated. The main reason of lesser density in these villages is the normal decadal increase in population.

The last two categories, which are below normal for the area, cover 66 of the 115 villages (i.e., 57.39 %) in which inhabit 52.05 % of the total population. We can thus say that a major portion of the area has below average density. On the other

hand, very high densities (973 - 1581) are observed in only 14 villages constituting only 12.18 % of the villages inhabited by 12.90 % of the total population. It has been observed that high density is more or less coterminous with high rate of growth.

Age and Sex Composition :

Age and sex composition are very important aspects of quantitative dimension of human resources. No one can proceed very far in the study of Human Resources Development (HRD) and their utilization without analysing age and sex of the people inhabiting the area. It is because of the fact that age and sex have special bearing on human resources planning for regional development and it is also because every sex of each age group possesses specific characteristics and plays differential role in the development of a region.

Age is an index of person's capability to work whereas sex ratio is an index of the socio - economic conditions prevailing in an area and is a significant element of regional analysis. The utilization of human resources, dependency ratio and all socio - economic activities of the area are guided

by the age group of the people. Not only this but also growth of population, marriage, birth rate, death rate, size of labour force and its participation rate in economic development, mobility of human resources, development, or formation of human capital and other aspects of quantitative and qualitative dimensions of human resources are guided by the age structure of the people.

The difference in sex ratio is the result of mainly three factors namely, birth rate, death rate and migration. The sex ratio in the area is mainly guided by these three factors. The change in sex ratio changes the socio - economic levels of an area. Thus age and sex ratio are fully related with each other and they are among the most significant factors upon which all activities of the area concerned depend.

As the villagewise age and sex information are not available in census report, the same have been calculated by sample survey of 14 villages in the year 1984. The total population of each village has been categorised under five groups as discussed earlier (Chapter - 2).

TABLE - 4.3

Age - Sex Composition of Human Resources and their Utilization Performance.

AGE - SEX COMPOSITION			PERFORMANCE OF HUMAN RESOURCES			
			Percentage to total Age Groupwise Males or Females			
Age Groups	Percentage to total Male or Female population		Utilised		Unutilized	
	M	F	M	F	M	F
0 - 4	270*	220	0	0	270	220
	(13.67)**	(13.26)	0	0	(100)	(100)
5 - 14	501	427	36	12	465	415
	(25.37)	(25.74)	(7.19)	(2.81)	(92.81)	(97.19)
15 - 34	643	516	411	77	232	439
	(32.56)	(31.10)	(63.92)	(14.92)	(36.08)	(85.08)

contd...

Contd... Table - 4.3

AGE - SEX COMPOSITION			PERFORMANCE OF HUMAN RESOURCES			
Age Groups	Percentage to total Male or Female population		Percentage to total Age Groupwise Males or Females			
			Utilised		Unutilized	
	M	F	M	F	M	F
35 - 59	358	353	343	77	15	276
	(18.13)	(21.28)	(95.81)	(21.81)	(4.19)	(78.19)
60 And Above	203	143	148	22	55	121
	(10.28)	(8.62)	(72.91)	(15.38)	(27.09)	(84.62)
Total Population	1975	1659	938	188	1037	1471

Source : Author's Survey 1984.

* : Unbracketed figures are the number of persons in 14 villages.

** : Bracketed figures are the percentages and represent the percentage of the whole Block.

Table - 4.3 shows the age groups, number and percentage of males and females, and number and percentage of utilized and unutilised human resources in each age group.

The age group 0 - 4 years signifies the infants only. From the table it is clear that in 1984 in this age group there were 270 male infants, that was 13.67 % of the total male population of the 14 villages. This figure may be considered to be representative of the whole Dhanarua Block . The number of female infants was 220, that was, 13.26 % of the total female population. This proportion is not insignificant.

But their contribution in economic sense as a constituent of labour force is nil, (Fig. 4.4). They are unable to do any work but they are, no doubt, future potential human resources of the area. They will become working human resources just after completing the age of 15 years. Therefore, they should be looked after by their parents carefully and they should be fed essential nutritious diet for proper growth.

It is also clear that the number of male and female infants is not equal. The male infants are more than female infants. This may be probably due to differential

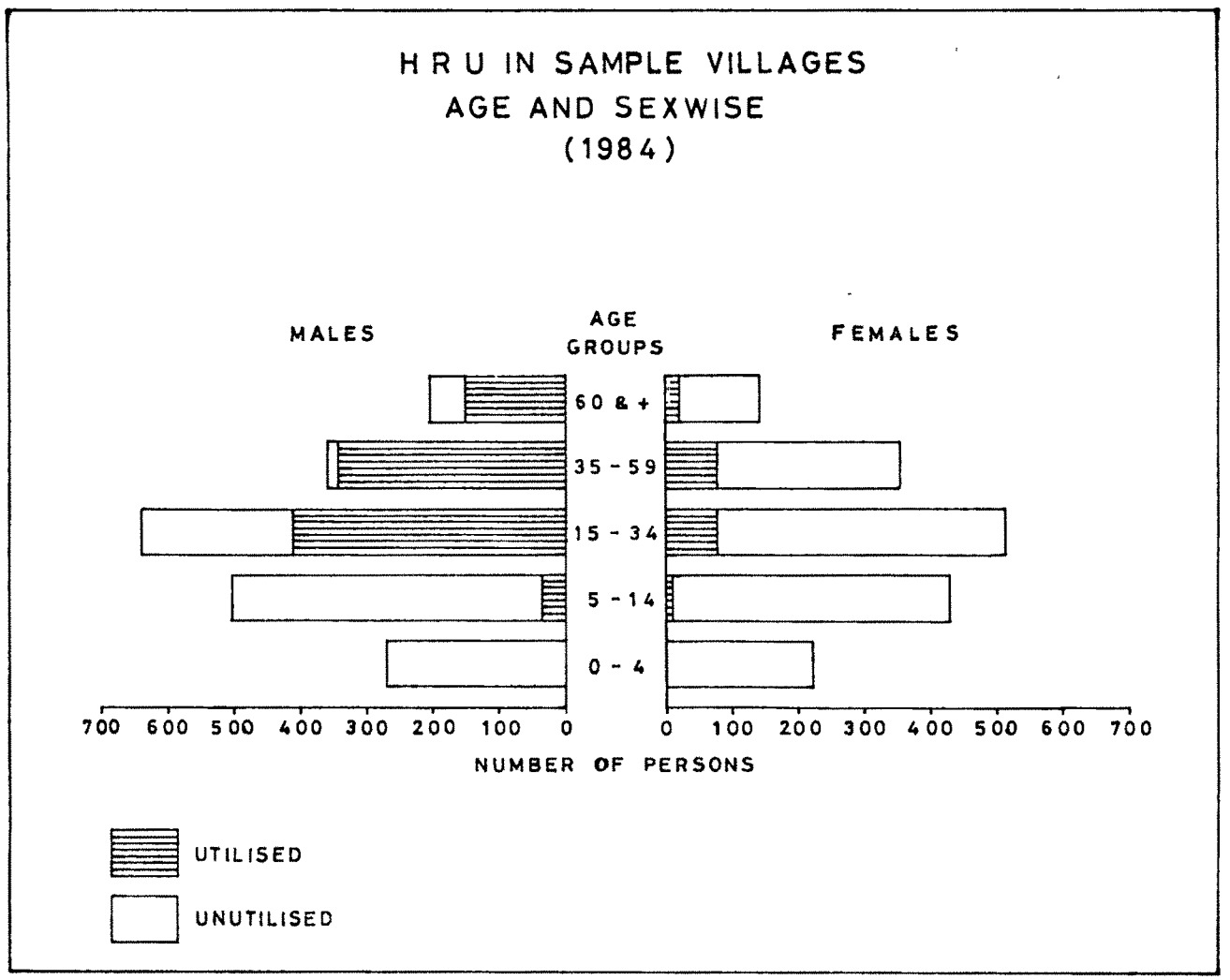
H R U IN SAMPLE VILLAGES
AGE AND SEXWISE
(1984)
MALES
AGE GROUPS
FEMALES
60 & +
35 - 59
15 - 34
5 - 14
0 - 4
700 600 500 400 300 200 100 0
0 100 200 300 400 500 600 700
NUMBER OF PERSONS
UTILISED
UNUTILISED

Fig.4.4.

birth and death rates.

The second category of age group is 5 - 14 years and is called the age group of potential human resources or of school going children or of child labour. In this age group the number of males was 501 and of females 427 which represented 25.37 % and 25.74 % of the total male and female population respectively.

This age group is of great significance because this is the proper period of time to develop human resources by sending children to the schools, where former education exists. They are really the capital or wealth of the area upon which the progress in near future depends. The quality of the wealth depends upon the quality and standard of education, health, etc. Therefore the school going children should be properly looked after and the development of their qualities should be through formal, non - formal, and welfare educational systems.

Though they are children, yet a small fraction of them contributes their skills, knowledge, physical and mental capacity in different rural economic activities. By law the child labour is prohibited, yet they are being utilized in the area. There were 36 male

child labourers, which is 7.19 % to the total males of this age group. The number of female child labourers was 12, which constitutes 2.81 % to the total females of this age group. The number and percentage of unutilized males and females in this age group were 465 (92.81 %) and 415 (97.19 %) respectively which is also clear in the Fig. 4.4.

Such a large percentage of children is "... . indicative of the large number of unproductive consumers. This means that the burden of dependents on the population is excessive" (Agrawal, 1982, p.82).

The male and female infants and children below fifteen years together constitute 39.04 % and 39 % respectively. It means 39.04 % males and 39 % females are dependents on working human resources of the area. Such a large portion of dependents is the result of mainly high birth rate and low death rate in the area.

The age group of 15 - 34 is called the age group of younger working human resources. The human resources of this age group are more active and more mobile. Chandna and Sidhu (1980, p. 88) also state that normally the people in the working age group of 15-35 are more mobile than the people in the other

age groups. From Table - 4.3 it is evident that this age group constitutes the largest percentage of human resources to the total population of the area. The number and percentage of males and females to the total number of males and females were 643 (32.56 %) and 516 (31.10 %) respectively.

So far the matter of utilization of manpower in this age group is concerned, there were 411 (63.92%) out of 643 males engaged in different productive economic activities (Fig. 4.4) . But the number and percentage of females of this age group under the category of utilized manpower was quite unsatisfactory because there were only 77 working females (14.92 %). The unutilized category of this age group shows that there were only 232 males (36.08 %) and 439 females (85.08%). It is clear that the percentage of females in the category of unutilized manpower was very high and become the burden on working population of this age group.

For reducing such a burden on the working people, there should be creation of jobs and the female manpower should be employed according to their capacity for sustain work. The unutilized male manpower should similarly be provided with jobs. They should also be

given on the job training for developing and improving their skills and capacity for the activities they are engaged in.

The 35 - 59 age group also constitutes the working manpower but the activeness and mobility of manpower of this age group are slightly less than that of the manpower of the age group of 15 - 34. This is because of the increasing age group and responsibilities of their domestic and social problems. The largest proportion of dependents are found in this category. Despite this, the manpower in both the sexes in this age group constitute the highest percentage of utilization.

Out of 358 males in this category 343 constitute utilized manpower, which is the largest percentage (95.81 %) of utilized manpower as compared to other age groups (Table - 4.3 and Fig. 4.4). The utilization of female manpower is also highest (21.81 %) in this category .

In this age group there were only 15 males (4.19 %) and 276 females (78.19 %) in the category of unutilized manpower which are also lesser than the percentage of unutilized human resources of other age groups.

The reason for difference in percentages of utilized manpower between the age groups of 15 - 34 and 35 - 59 is that the former age group includes the students in higher education (in colleges or universities) who are mostly unutilized human resources. Unmarried girls, who are to go to their husband's house after getting married are also mostly unutilized womenpower particularly in cultivator dominated villages as their parents do not send them on work in the fields for consideration of social prestige . However, a part of the unmarried girls population is on work in the agricultural labourer dominated villages. In this way the students of colleges and universities and mostly unmarried girls enlarge the percentage of unutilized human resources category in the age group of 15 - 34 years.

On the contrary, in the age group of 35 - 59 years, there are no students and unmarried girls, leaving aside exceptional cases, the entire human resources can be on work. That is why, the percentage of utilized human resources in this age group is higher than that in the former one. Consequently the percentage of dependents in this age group is comparatively less than in other age groups.

But in terms of number of human resources engaged in different economic activities, the age group of 15 - 34 years exceed the number of human resources in the age group of 35 - 59 years. There are 411 males and 77 females working in the former age group whereas 343 males and 77 females in the latter age group. The number of female workers in both the categories remain equal. Therefore, in terms of number in the total utilized human resources, the former age group constitutes the larger man and woman power than the latter one. But in terms of percentage to total males and females, age groupwise, the latter constitutes the largest percentage of utilized human resources.

The last category of age group is 60 and above which is called the age group of old human resources or less utilizable human resources. All these people who have attained the age group of 60 and above are categorised as old. Out of 203 males and 143 females 148 males (72.91 %) and 22 females (15.38%) were on works (Table - 4.3 and Fig. 4.4).

In the category of unutilized, human resources in this age group are only 55 males (27.09 %) out of 203 and 122 females (84.62 %) out of 143. They were

not on works and they have been a burden on working people as they are to be fed, clothed, looked after and provided with sufficient health facilities.

It has been observed that contribution of the old people in the area's economy is not negligible. 72.91 % of the old people in male category was utilized and only 27.09 % remained unutilized. It means a vast majority of old male human resources contribute their skills, knowledge, physical or mental capacity in production processes in different economic activities. The percentage of female utilized human resources (15.38 %) is also not meagre in comparision to the female utilized human resources of other age groups. It, therefore, may be stated that the proportion of dependents in this age group is not high and the people of 60 years old and above must be included in the concept of human resources because a greater part of the old people are active and are engaged particularly in the agricultural sector of rural economy.

In sum, it has been observed that in each age group category the number of females is smaller than that of males. This difference may be due to the differential birth and death rates, (birth 48.10 and 39.18; and death 13.67 and 13.06 respectively) in the

area. The death rate of males and females are approximately the same. The difference of 8.82 between the birth rate of males and females helps in increasing the number of males over females. The slightly increasing female deaths (0.19) is also responsible in increasing the number of males over the females. The reasons for higher female mortality may be negligence in their infancy, childhood and old age.

Secondly, the maximum manpower utilization in terms of number comes in the age group of 15 - 34 years but in terms of percentage it comes in the age group of 35 - 59 years.

Thirdly, the maximum dependents are in the age group of 0 - 4 and 5 - 14 years which is natural and this proportion may not be reduced except lowering down the birth rates. The major dependents on working people are females in the age groups of 15 - 34, 35 - 59 and 60 and above years and males in the age groups of 15 - 34 and 60 and above years.

On the whole it has been found that in 1984 there were 54.35 % males and 45.65 % females to the total population of the area. The percentage of male utilized manpower to the total males in the area was

47.49 % whereas the percentage of female utilized manpower to the total females in the area was 11.33% which was quite unsatisfactory. The unutilized manpower category comprised 52.51 % males and 88.67 % females to total males and females in Dhanarua Block.

The sex ratio in the study area was only 840 females per 1000 males in 1984 which is very less in comparision to the national sex ratio (935) according to 1981 census. This is the result of differential birth and death rates in both the sexes in the area.

Birth and Death Rates :

The birth and death rates of Dhanarua Block has been assessed on the basis of the data collected from fourteen sample villages in 1984. So the results of these villages are representative and represent of the whole Dhanarua Block.

For this only crude birth and death rates have been calculated.* And for knowing the depth the

---

* The crude birth and death rates (r) have been calculated by the formulae :

$$r = \frac{b}{p} \times k \quad \text{and} \quad r = \frac{d}{p} \times k$$

respectively, where, r is crude birth and death rate, b is the total number of live births during the year ; p is total population during the year; d is the number of death during the year and k is 1000.

crude birth and death rates of Cultivator Dominated (CD) villages and Agricultural Labourer Dominated (ALD) villages have been calculated separately which are shown in the Table-4.4.

The Table - 4.4 shows the birth and death rates per thousand males and females population in the area. In the CD villages the birth rate of male was 47.99 per thousand and the birth rate of female was 34.66 per thousand . The category of birth rate, in the ALD villages, shows that the male birth rate was 48.27 per thousand and the female birth rate was 45.26 per thousand in the year 1984. There is clear difference in the birth rates of males and females between the CD and ALD villages. The birth rate of males in the ALD villages was slightly more than the birth rate of males in the CD villages. But the birth rate of females in ALD villages was higher (10.60 per thousand) than that of the CD villages in the Block. In this way , the birth rates of both the sexes were higher in the ALD villages than the birth rates of both the sexes in the CD villages in the year 1984. The main reasons for higher birth rate in the ALD are the percentage of higher illiteracy, poor standard of living , and the tendency to have more children in the family . The third reason is the most crucial because mostly the

TABLE - 4.4

Birth and Death Rates of Males and Females (per thousand)

Type of villages	Total of Males or Females		Birth rate		Death rate	
			Male	Female	Male	Female
Cultivator Dominated Villages	1167	952	56 (47.99)*	33 (34.66)	9 (7.71)	17 (17.86)
Agricultural Labourer Dominated Villages	808	707	39 (48.27)	32 (45.26)	18 (22.28)	6 (8.49)
Whole Villages or Area	1975	1659	95 (48.10)	65 (39.18)	27 (13.67)	23 (13.86)

Source : Author's Survey 1984.

* : Figures in brackets show the rate of births and deaths per thousand males and females.

poor people consider more children as an asset to their family. It is because of the fact that "... . children at a very young age start helping their parents in work and, therefore, prove to be assets for the family," (Agrawal, 1982, p. 87).

Looking into the deaths in the C D villages the females death - rate (17.86 %.) is about two - and - a half times higher than those of the males (7.71 %.). This is because in these villages the female infants are looked down upon by the parents as an economic and social liability, while the male child is credited as an asset to the family . This helps in increasing the number of males over females in these villages.

On the contrary, in the ALD villages the death rate among the males (22.28 %.) is nearly three - times higher than among the females (8.49 %.) This may be owing to poor resistance power of males against various diseases as compared to females, (Chandna and Sidhu, 1980, p. 81). Besides, economic burden of pulling the whole family with him and mental worries associated with it may be subsidiary reasons.

The Table - 4.4 also shows the general crude birth and death rates of Dhanarua Block as a whole.

The birth among males was 48.10 per thousand and among females 39.18 per thousand, whereas death rate among the males was 13.67 per thousand and among the females 13.86 per thousand.

From the above it is evident that the birth rate among the males was higher (8.92 %.) than among the females while the death rate was slightly lower than among the females. Thus the higher birth rate and lower death rate among the males than among the females are major reasons of increase in the number of males over the females.

Growth of Population :

Another distinctive characteristics of quantitative dimension of human resources is the growth of population. The word 'growth' of population refers to change in population numbers inhabiting an area during specific period of time, irrespective of the fact whether the change is positive or negative. According to Chandna and Sidhu (1980, p. 31)"population growth in an area is an index of its economic development, social awakening, cultural background, historical events and political ideology". Growth of population is the result of births, deaths, and migrations of

both the sexes. Population growth affects economic, social, cultural aspects of the people inhabiting an area. The planning for regional development is also related to the growth of population.

Population growth or population change is measured both in terms of absolute numbers or percentage change. From the point of view of spatio - temporal dimension of human resources the percentage change or growth of population is preferred. This is normally useful to represent the intercensal change in population.

First let us look into the growth of population in the area as a whole. There were 94444 people in 1971 which increased to 114971 in 1981. Thus the absolute growth in population within 10 years was 20527, and an annual increase in population was 2053 person*.

Actual rate of population growth has also been calculated.+ It shows that area's population grew

---

* Calculated by the equation $\frac{P_n - P_o}{n}$, where, P_n = total population, 1981; P_o = total population, 1971; and n = the year involved.

\+ By equation $\frac{P_n - P_o}{P_o} \times 100$ or dividing the number of absolute change by the total population of 1971 and multiplying with 100.

by 21.74 % between 1971 and 1981 , which is the composite result of birth, death, and migration.

This review of population change highlights the problems of manpower availability in the area. Whereas the area as a whole faces the problem of providing work and amenities to the increasing number of people. There are some villages which may face the scarcity of labour even for the essential agricultural operation. This calls for adjustment of intra - regional, or say, intervillage labour mobility. Besides, the villages with very high growth may be choosen for immediate provision of cottage and village industries and training in skills to prevent frustration, unrest and migration.

Now, let us have a close view to understand in situation in the villages separately. Villagewise growth percentages have been calculated* and the data thus obtained have been grouped into nine categories on the basis of 'natural breaks', (Dickinson, 1970, pp.43-44) and the villages falling within the respective categories have been grouped together(Table -4.5).

---

* By $\frac{P_2 - P_1}{P_1}$ X 100, where, P_2 = total population, 1981; P_1 = total population, 1971.

TABLE - 4.5

Villagewise Population change (1971-1981).

Levels	Percentage change	Number of villages	Percentage of villages
High	Above4 100	4	3.45
Positive	64 - 100	4	3.45
Growth	48 - 64	4	3.45
Moderate	39 - 44	8	6.90
Positive	25 - 37	29	25.00
Growth			
Low	16 - 24	34	29.31
Positive	1 - 15	25	21.55
Growth			
Negative	-1 - -10	5	4.31
Growth	Above -10	3	2.59
	Total	116	100.00

Source : Census data 1971 and 1981.

High Growth :- Out of 116 villages four villages (3.45 %), namely Mirzapur, Rarha, Hasanpur and Semhari - Khurd show a change of more than 100 percent. These

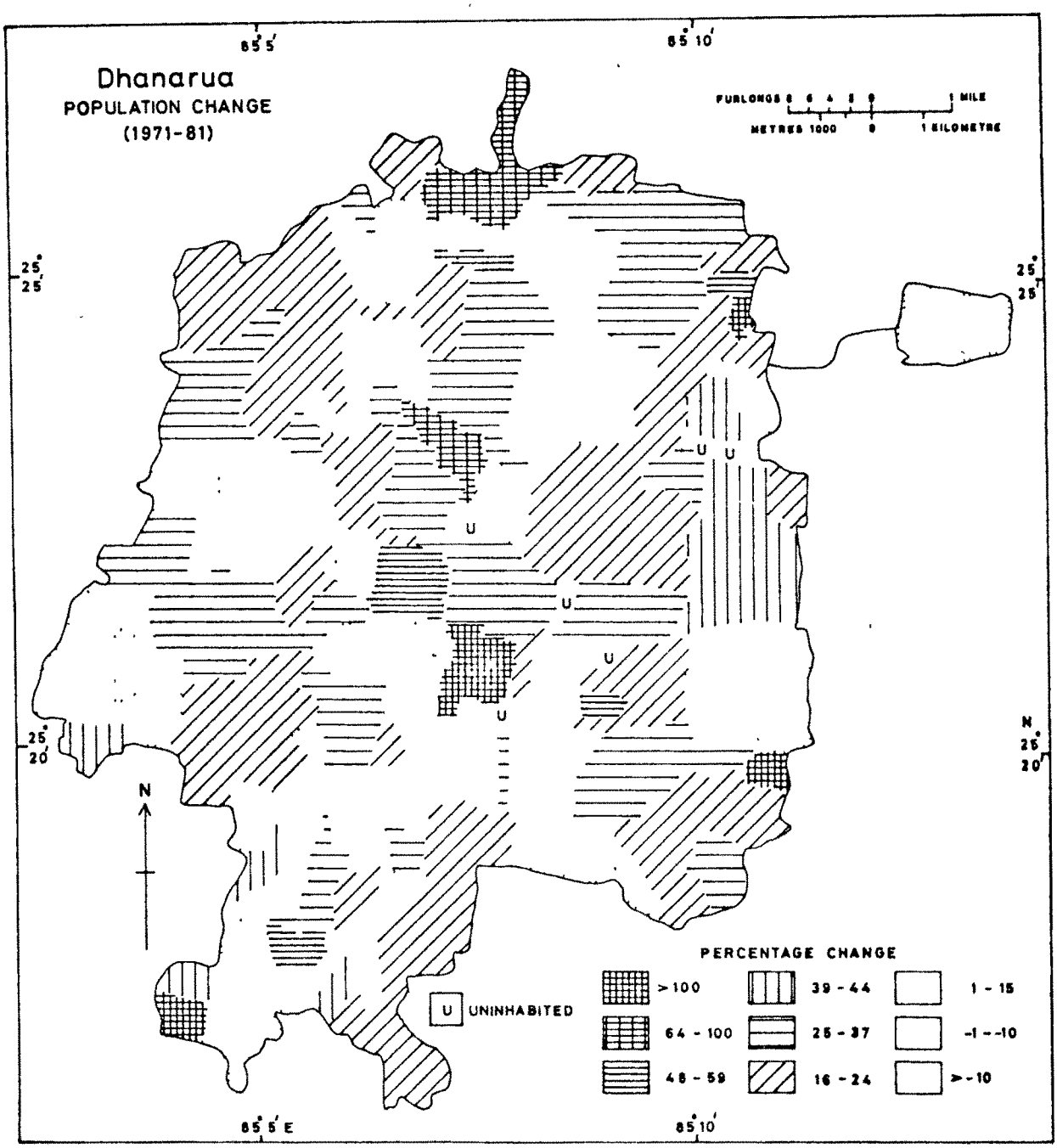
Dhanarua
POPULATION CHANGE
(1971-81)
85°5'
85°10'
FURLONGS 8 6 4 2 0 1 MILE
METRES 1000 0 1 KILOMETRE
25° 25'
25° 20'
N
U
U UNINHABITED
PERCENTAGE CHANGE
>100
64 - 100
48 - 59
39 - 44
25 - 37
16 - 24
1 - 15
-1 - -10
>-10
85°5' E
85°10'

Fig 4 5

villages are widely scattered in four patches (Fig.4.5).

Another set of four villages (3.45 %) show percentage changes ranging from 64 % to 100 %. Out of four two villages namely, Kashinagar and Safipur stand side by side in the extreme north while the other two Pranpura and Gauspur-Dubhara occupy the northern central portion of the area.

The third set, again of four villages, show positive changes ranging between 48 % and 64 % . They comprise 3.45 % of the total number of villages. They are found scattered in four patches, Bazidpur in south west, Nawasichak and Sain in almost the centre and Ziaudinchak in the north east.

The above mentioned twelve villages show very high rate of positive growth in population. None of these is in the western half of the area, and most of these are occupying a central linear zone, though the continuity is broken by smaller growth rates.

Moderate Growth :- Fourth category of villages have percentage changes varying, between 39 % and 44 % . Eight villages are included within this category. They

are Hansapur, Pabhera, Shakarpura, Barhanpura, Janakpur, Hansopur, Milik-Dewan and Siria. All of these are scattered in the south western and eastern portions of the area.

One fourth (29) of the total number of villages fall within the fifth category of percentage change (25 to 37 %). The villages in this category are mentioned in the Appendix - 2-B.

Thus 37 villages show a moderate positive population growth.

Low Growth :- 59 villages (50.86 %) show low positive growth rates varying between 1 % and 24 % (Appendix 2-B). This groups is again broken up into two categories - with growth rates between 16 and 24 %, and between 1 and 15 %. The largest number of villages (34, 29.31 %) shows the percentage cange between 16 and 24 % (Fig. 4.5).

The category with percentage growth between 1 and 15 includes 25 villages (21.55 %) which are scattered almost all over the area. They show the lowest positive percentage change within the decade 1971 - 1981.

Negative Growth :- Eighth and ninth categories of percentage change show the negative growth of population which is seen in eighth villages constituting 6.90 % of the total number of villages. In the eighth category, there are five villages (4.31 %) namely Mian-chak, Deodha, Telhara, Nataul, and Dewan where the negative change ranges between — 1 % and —10 % . The last category of three villages, (Sisauna, Basaurhi and Bara) constituting 2.59 % of the total villages show more than — 10 % negative growth change in population . Thus, only these eight villages show negative population growth in the area (Fig. 4.5).

The main reasons of the negative change can be stated in terms of birth and death rates. Most of the villages of these two categories are agricultural labourer dominated villages where both birth and death rates are higher as observed earlier.

Besides, the out migration of landless labourers may be another potent reason. It has been observed that there is a considerable flow of labour forces from the area to the 'green revolution' area of Punjab and Haryana.

Labour Force and its Participation Rate :

Another distinctive characteristic of

quantitative human resources is the size of labour force and its participation rate in the development of a region. It plays a very significant role in all sectors of economy. The size of labour force and its distribution in primary secondary, and tertiary economic activities is the indicator of the level and pattern of economic development. It clearly indicates whether the type and pattern of economy in the area is agrarian, semi-industrial or industrial. It also indicates the scope of future employment opportunities in the area. In fact labour force is the sole and far important asset, capital or wealth of a region and all round development depends on the quantity and quality of labour force.

The words 'labour force' signify all persons classified as economically active, i.e., those who actually supply effort for the production of goods and services for exchange and those who, though not working, want to do so or seek an opportunity to do so (Masum, 1982, p. 3). It means labour force is the sum total of persons working and seeking work. It is the major part of human resources or manpower resources in an area concerned.

The term 'participation rate' or 'activity

rate' refers to the ratio of persons in the labour force to the population. Labour force participation rate is calculated in percentage by the equation.

$$PR = \frac{W + S}{P} \times 100$$

where PR = participation rate, W = the total workers engaged in different economic sectors, S = the sum of unemployed persons or those seeking employment, and P = the total population.

According to Chandna and Sidhu (1980, p. 105) participation rate or activity rate may be devided into four types such as :

1. Crude activity rate which refers to the percentage of economically active people in the total population.

2. General activity rate which refers to the percentage of economically active persons over 15 years of age.

3. Sex specific activity rate which refers to percentage of male or female labour force to the total male or female population.

4. Age specific activity rate which

refers to the percentage of labour force to the total population in respective age groups.

Sex Specific Participation Rate :- For the lack of data on persons seeking work only villagewise sex specific workers participation rates for the year 1971 and 1981 have been calculated dividing the total workers of the respective villages by the total male or female population of the same villages and multiplying by 100 . The result has been summarised in Tables - 4.6 and 4.7 and Figs. 4.6 and 4.7 .

Male Workers Participation Rate :- Before discussing the villagewise proportion as regards male participation let us see the situation in the Block as a whole. In the Dhanarua Block as a whole, 24829 males (50.75%) out of a total of 48927 males were working in 1971 while in 1981 29362 (50.10 %) out of 59403 males were participating as workers. It is clear that the absolute number of workers increased in 1981 but in terms of percentage it slightly decreased by 0.65 %. It may be due to the larger percentage increase of male children during the decade.

Now let us analyse the situation villagewise :

TABLE - 4.6

Spatial Pattern of Total Male workers Participation Rate (1971 - 1981).

Participation Levels	Percentage to Total Male Population	Number of Villages		Percentage of Villages	
		1971	1981	1971	1981
Very High	69.5-77.5	0	1	0	0.86
High	61.5-69.5	2	6	1.74	5.17
Medium	53.5-61.5	28	28	24.35	24.14
Low	45.5-53.5	69	64	60.00	55.17
Very Low	37.5-45.5	16	17	13.91	14.66
Total Villages		115	116	100.00	100.00

Source : Census Reports 1971 and 1981.

Table - 4.6 shows that the levels of male workers participation rates and their spatio - temporal variation in Dhanarua Block. There are five levels of

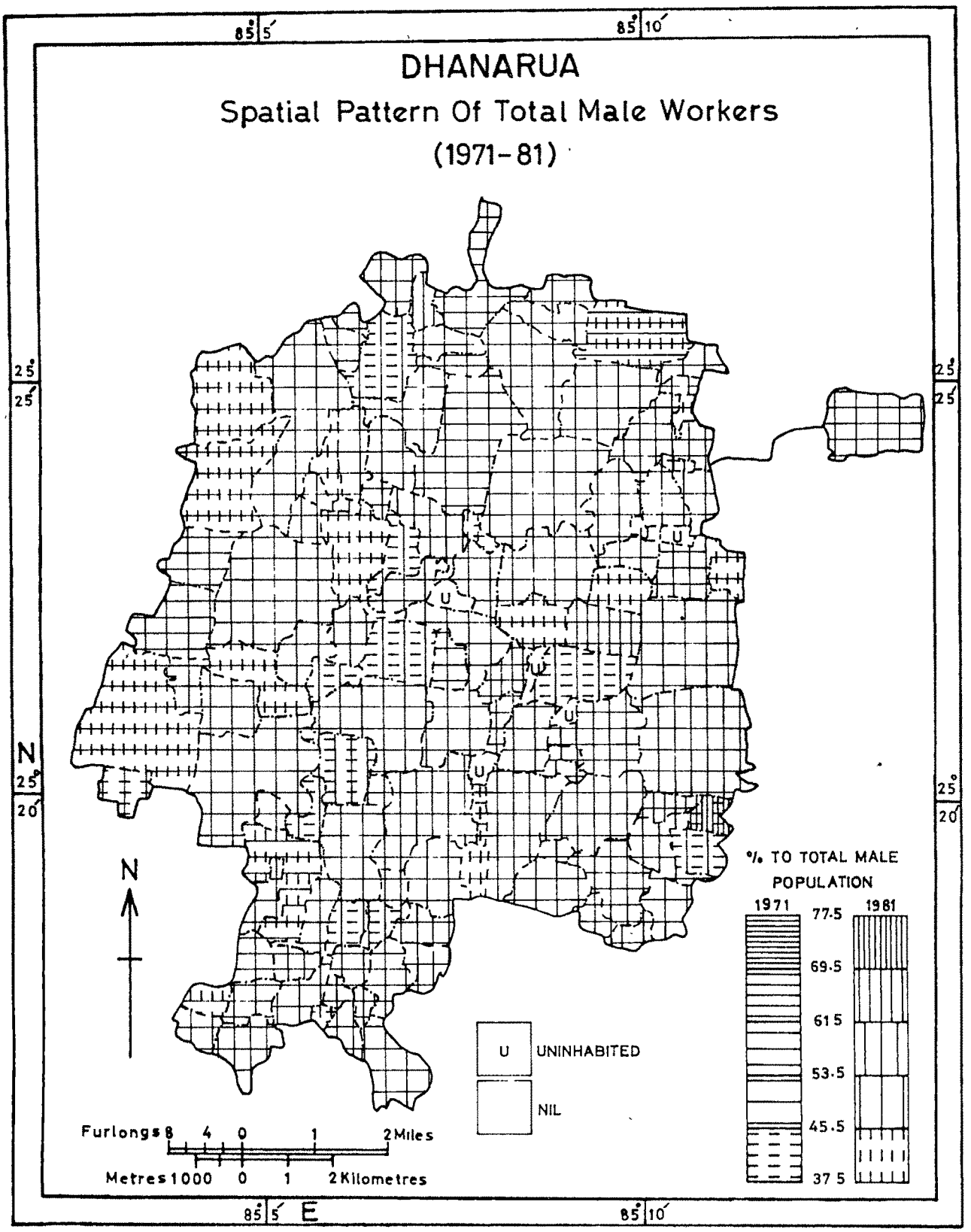
DHANARUA
Spatial Pattern Of Total Male Workers
(1971-81)
85° 5′
85° 10′
25° 25′
25° 20′
N
E
U
U
U
U
U
U
U
N
U UNINHABITED
NIL
% TO TOTAL MALE POPULATION
1971
1981
77·5
69·5
61·5
53·5
45·5
37·5
Furlongs 8 4 0 1 2 Miles
Metres 1000 0 1 2 Kilometres

Fig. 4·6

workers participation — Very Low, Low, Medium, High, and Very High which have been arranged at the interval of 8.0 % .

The map (Fig. 4.6) drawn on the basis of the above table shows that there were seven uninhabited villages in 1971 which decreased to six in 1981 . This is the reason for the difference in the total number of inhabitable villages, 115 in 1971 and 116 in 1981, out of the total of 122 villages in the Block.

In the very high level category (69.5 — 77.5 %) the number of villages was nil in 1971 while in 1981 one village, Semhari Khurd, came up which was in the very low level category in 1971 (Fig. 4.6). This was only due to considerable growth in working males.

In the high level category (61.5 - 69.5 %) there were only two villages (1.74 %) in 1971 namely Pranpura and Deokali while in 1981 they increased to six (5.17 %). In 1971, out of six one (Rasula) was in the very low, another one (Pabheri) was in the low, and three (Sahru, Kalianpur and Nasratpur) were in the medium level category while one (Safipur) new inhabited in 1981. The villages of 1971 did maintain their levels and slumped down to low (Paranpura)

and very low (Deokali) levels in 1981 due to decrease in their working males.

In the medium level category (53.5 — 61.5 %) the number of villages was 28 in 1971 (Appendix 2-C) which remained the same till 1981. Only the percentage of villages slightly decreased from 24.35 % to 24.14 % owing to one addition in the number of inhabited villages. But it is to be noted that all the 28 villages of 1971 did not maintain the same grade till 1981. Only nine of them did so. They are Bir, Nawasichak, Bhaipur, Hansopur, Bazidpur, Piprawan, Baghbar, Dhamaul and Siria, (Fig. 4.6). Out of the remaining 19 villages 14 (Nanauri, Bhagwanpur, Mianchak, Kashinagar, Dost Muhammadpur, Baurihi, Manpur, Majahauli, Keorha, Kewali, Aurangpur, Basaurhi, Binaikapali, and BariBigha) slumped down to the low, two (Barhampura and Dewan) to the very low, while three (Sahru, Kalianpur and Nasatpur) went up to the high level category.

In the low level category (45.5 — 53.5 %) there were 69 villages (60.00 %) in the year 1971 which decreased to 64 (55.17 %) in 1981 (Table - 4.6 and Appendix 2-C). This is an indication of gradual increase in male worker's participation rate. But the same villages did not maintain the grade. Only 40 villages

maintained the same level, (Fig. 4.6 and Appendix 2-C). One village (Pabheri) upgraded to the high, 17 (Muhammadpur, Ziaudinchak, Gauspur Dubhara, Sikoha, Thubha, Telhara, Pakaura, Gonpura, Binaika, Shahopur, Parmanki, Panditganj, Harla, Bardiha, Bijpura, Amarpur, and Chhati) to the medium while eleven (Mirzapur, Abdhara, Jalalpur, Larha, Lawaich, Barni, Chanaki, Nadwan, Niman, Nemrapali, and Tarwa) were degraded to very low level category. This category includes the largest number of villages in both the years and shows that more than 55 % to total villages represented workers participation rate between 45.5 % and 53.5 % .

In the very low level category (37.5 - 45.5%) the number of villages in 1971 was sixteen (13.91 %) which decreased to seventeen (14.66 %) in 1981, (Table - 4.6 and Appendix 2-C). Here only three villages (Mustafapur, Janakpur, and Phulpura) maintained their levels. Nine villages (Seoti, Rasula, Rupaspur, Atarpura, Sain, Shakarpura, Sewai, Raipura, Semhari Buzurg) went up to low, two (Bhergawan and Muzaffarpur) to medium and one (Rasula) to high and another one (Semhari Khurd) to very high level, in 1981. It shows that except three all other villages of 1971 went up the higher levels due to increase in the number of workers in the interval of ten years.

From the above it is evident that there were 115 villages in 1971, out of which only twenty nine (25.21 %) slumped down while eighty six (74.79%) went up in the levels. It is an indication of decrease and increase respectively in the percentages of male workers to total population in respective villages during the span of one decade.

Female Worker's Participation :- Table - 4.7 shows five levels of bfemale worker's participation rates which have been arranged at 13 % intervals.

In 1971 seventeen villages had no female workers at all. These were Mirzapur, Chhitrauli, Abdhara, Nawasichak, Dostmohammadpur, Bhaipur, Manpur, Shakarpura, Chistipur, Janakpur, Kalianpur, Muzaffarpur, Phulpura, Piprawan; Semhari, Khurd, Nasratpur, Dhamaul. Thus number of villages without female workers remained to same till 1981, but the villages were not the same. Only six of them (Nawasichak, Dost-mohammadpur, Bhaipur, Janakpur, Muzaffarpur, Phulpura) remained without female workers, one village (Mirzapur) upgraded to the low category of participation and ten to very low level. Among the eleven villages (Appendix 2-D) which showed lack of female participation in 1981 one

(Safipur) was uninhabited in 1971, two (Hulaschak and Basaurhi) were in the medium level, other two (Rasula and Lodipur) in the low and six (Khurrampur, Sheodaha, Pakaura, Bazidpur, Baghbar and Atarpur)

TABLE - 4.7

Spatial Pattern of Female Worker's Participation rate (1971 - 1981)

Participation Levels	Percentage to Total Female Population	Number of Villages		Percentage of Villages	
		1971	1981	1971	1981
Very High	52 - 65	0	1	0	1.01
High	39 - 52	3	1	3.06	1.01
Medium	26 - 39	6	6	6.12	6.06
Low	13 - 26	25	29	25.51	29.29
Very Low	0 - 13	64	62	65.31	62.63
Total Villages		98	99	100.00	100.00

Source : Census Reports, 1971 and 1981.

were in the very low level category, (Fig. 4.7). Obviously, eleven villages which had no female workers in 1971, got them in 1981, while other eleven villages which had female workers in that year lost them in 1981. This may be on account of inward and outward movement of female workers due to marriage and seeking work with their husband. The female children who were not workers in 1971 might have entered into work force in a decades' time. Some deaths also might have snatched away some number of the female work force.

In the very high level category (52 - 65 %) there was no village in 1971 but in the year 1981 one village (Muhammadpur) entered to this category. Which was in the low level in 1971 (Fig. 4.7). A sudden jump to very high level indicates a sharp turn in female participation.

In the high level category (39 - 52 %) three village (Bhagwanpur, Pranpura, and Aurangpur) in 1971 which decreased to one (Tethara) in 1981. All the three villages of 1971 went down the category, two (Bhagwanpur and Aurangpur) of them degraded to very low and one (Pranpura) to medium level in ten years.

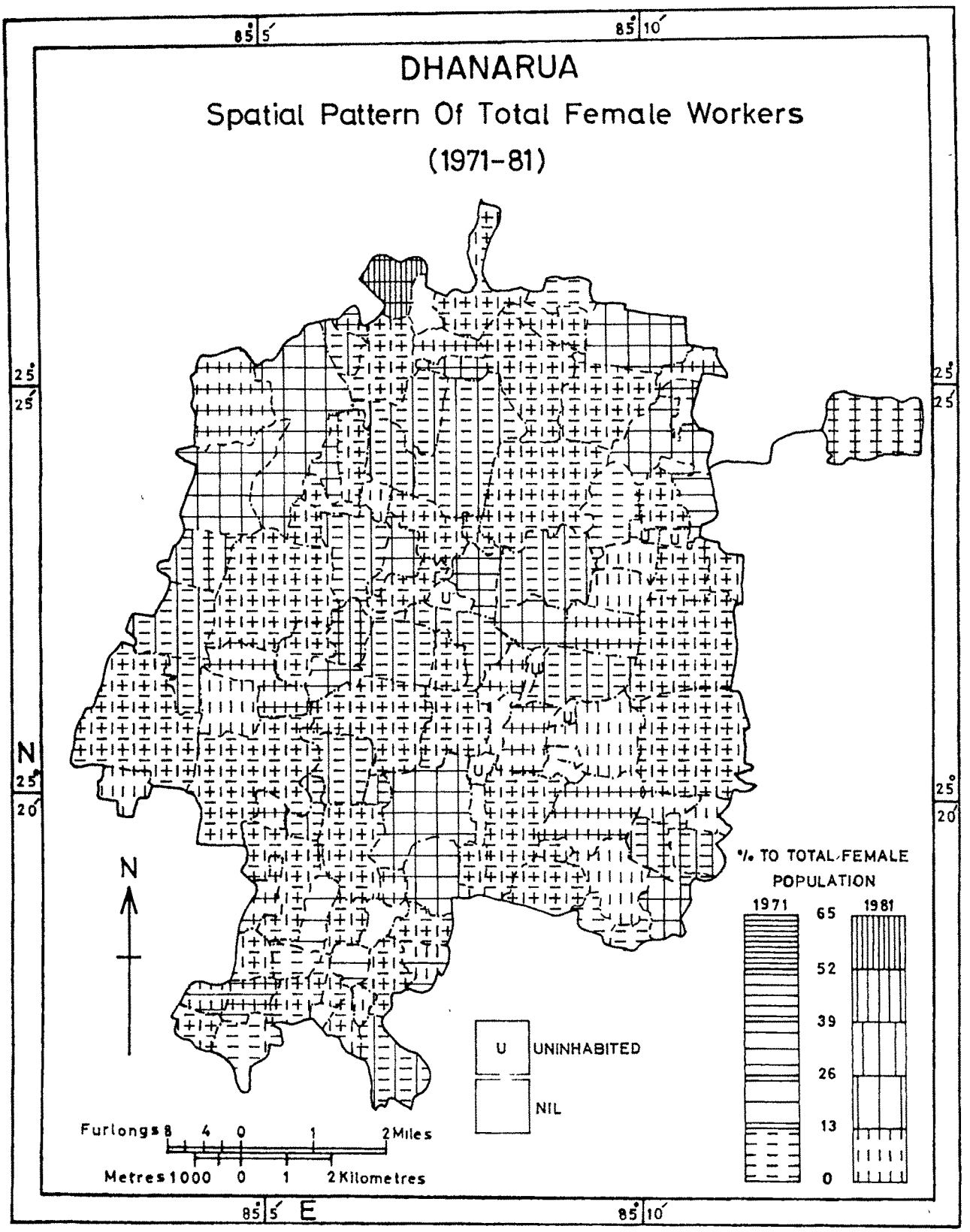
DHANARUA
Spatial Pattern Of Total Female Workers
(1971-81)
85° 5′
85° 10′
25° 25′
25° 20′
N
E
U
U UNINHABITED
NIL
% TO TOTAL FEMALE POPULATION
1971
1981
65
52
39
26
13
0
Furlongs 8 4 0 1 2 Miles
Metres 1000 0 1 2 Kilometres

Fig 4·7.

But the village, Telhara, which went up the level 1981 was in the very low level in 1971, (Fig. 4.7).

In the medium level category (26 - 39 %) the number of villages remained the same throughout the decade but the percentage went slightly down from 6.12 to 6.06 due to addition of one village in the list of inhabited villages. The villages, however, were not the same. All the six villages in this category in 1971 went down the grade . Two of them (Hulaschak and Basaurhi) became devoid of female labour force by 1981. One (Barhanpura) went down to very low category and three (Nadpura, Larha and Atarpura) entered low level category. In this place a new set of six villages (Appendix 2-D) made up this in grade in 1981, four villages (Kewali, Parmanki, Amarpur and Semhari - Buzurg) from very low category, one (Armar) from low, and another one (Pranpura) from high level category.

In the low level category (13 - 26 %) there were twenty five villages (25.51 %) in the year 1971 which increased to twenty nine (29.29 %) in 1981. Only nine of them maintained their grade in 1981 (Appendix 2-D), two (Rasula and Lodipur) went down to the nil category, twelve to the very low category

but one (Armar) was pushed up to the medium and another one (Muhammadpur) to the very high level category.From among the remaining twenty villages of 1981 one (Kalianpur) was in the nil category fifteen in the very low, three (Nadpura, Larha and Atarpura) in the medium and one (Mirzapur) was in the high level category (Fig. 4.7). It is to be noted that most of the villages which were in this category in 1971 have gone down to the very low level category in a decade's time whereas most of the villages which made this grade during 1981 have come up from very low to low level category during the same period.

In the very low level category (below 13 %) the number of villages in 1971 were 64 (65.31%) which decreased to 62 (62.63 %) in 1981. Only 38 villages maintained their grades till 1981 (Appendix 2-D). Of the rest six degraded to the nil category fifteen were up graded to the low, four (Kewali, Parmanki , Semhari Buzurg and Amarpur) to medium and one (Telhara) to high level category from the very low level. Similarly out of the remaining twenty four villages of 1981, nine came up from the nil category, twelve slumped down from low level, one from medium and two from high level, (Fig. 4.7). This level of

female labour participation is seen in the largest number of villages and shows that in more than 62 % of the villages less than 13 % of the female population engaged themselves in any work.

For the area as a whole, only 4557(10%) females in 1971 and 4624 (11 %) females in 1981 were on work. The decadal growth is only 67 female workers. It means that the rate of increase of female workers is very slow, which in many ways hinders the development of the area.

The most important reason for low female participation is the deep rooted socio - religious tradition of not allowing the womenfolk to work out-door. This is particularly so among the cultivator class who do not allow their womenfolk to work outside their home. The majority of female workers come from the agricultural labourer class who belong to the lower level of caste hierarchy and who are also steeped in poverty and illiteracy. Another reason is the lack of employment opportunities, other than in agricultural sector. Dhanarua Block is purely rice, wheat and lentil dominated agricultural area where only seasonal employment is available. Lack of education is another factor which limits female work participation. In

Dhanarua Block only 13 % of the total female population was litertes in 1981, due to which they were not fit for any activity other than agricultural. Age and sex structural of the population also influences the female work participation as the married women between the ages of 15 and 34 have to bear maternity problems and they are busy in rearing their children and inc>domestic chores.

Age and Sex Specific Participation Rate :- Census Reports, however, do not provide villagewise information on age structure and levels of education. Therefore, data have been collected from a sample of fourteen villages which are represented in the Tables - 4.8 and 4.9.

The Table - 4.8 shows comparative figures of participation rate of labour force (the sum total of workers and economically active unemployed work seekers) and workers.

In the age group of child labour (5 - 14) there was no difference between the category of labour force and workers because of the absence of children in the category of work seekers. In fact, children below 15 years of age normally do not wish to work or seek employment because they are mostly school going and more

TABLE - 4.8

Age and Sex Specific Labour Force Participation Rate

(1984)

Age Groups	Total Population		Labour Force Availability Rate		Workers Participation Rate		Work Seekers	
	M	F	M	F	M	F	M	F
0 - 4	270	220	-	-	-	-	-	-
5 - 14	501	427	36* (7.19)**	12 (2.81)	36 (7.19)	12 (2.81)	-	-
15 - 34	643	516	515 (80.09)	108 (20.93)	411 (63.92)	77 (14.92)	104 (16.17)	31 (6.01)
35 - 59	358	353	344 (96.09)	77 (21.81)	343 (95.81)	77 (21.81)	1 (0.28)	-
60 & +	203	143	148 (72.91)	22 (15.39)	148 (72.91)	22 (15.39)	-	-

Source : Author's Survey, 1984.

* : Asolute number of persons.

** : Bracketed lower figures in the cells are percentages to total male or female population under respective age group.

than this, they are not so strong in the sense of physical and mental capacity. In spite of this there are thirty six (7.19 %) male children and twelve (2.81%) female children fully or partially employed in agricultural and non-agricultural economic functions in the Block. Their employment is the result of poverty. Their poor economic situation compel them to contribute their labour power resources either along with their parents or even alone. This is inspite of the fact that child labour is prohibited by law in the country.

Certainly the utilization of child labour is assessed to be harmful in the development of the area. They are potential human resources and the future of the area depends mainly upon the qualities of children of this age group. From this point of view child labour should not be utilized in any sector of economy.

In view of this children should be provided the facilities of schooling, health, nutritions food and other assential amenities which may promote their physical and mental capacity, knowledge, skills etc., for the utilization in very near future.

In the working age group of 15 - 34 there were 515 males (80.09 %) and 108 females (20.93 %)

in the category of labour force. But in the category of working force there were 411 males (63.92 %) and 77 females (14.92 %). The difference between them was due to addition of work seekers or economically active unemployed persons in the category of labour force. More than 99 % of the total economically active unemployed males and 100 % females were only in this age group.

Table - 4.8 shows that in terms of absolute figures the number of males and females in this age group was highest in the category of labour force, working force and work seekers. But in terms of percentage the participation rate of labour force and working force sexwise was second in grades. This was because more than 19 % males and 79 % females of this age group were non-workers. They were economically inactive or non - workers and dependent people in the Block.

In the working age group of 35 - 59 there were 344 (96.09 %) males and 77 (21.81 %) females in the category of labour force. But in the category of working force there were 343 (95.81 %) males of this age group. There was a slight difference between the percentage of male labour force and male working force. This was only due to addition of only

one male person in the labour force. This person was economically active but unemployed and seeking work. He was a matriculate. It is to be noted that only one (0.28 %) male was in the category of work seekers. It shows that most of the males in this age group get employment and that is why only 14(4%) of this males were economically inactive or non-workers.

It is evident from the table that there was no difference in the number and percentage of females in the category of labour force and working force in absence of work seekers; though their participation rate was only 21.81 % . This indicates that 78.19 % females of this age group were non-workers. It is remarkable that more than two third females in this age group were dependents upon the working people.

In the age group of 60 and above there were 148 (72.91 %) males and 22 (15.39 %) females in the category of both labour force and working force as there were no work seekers. The workers of this age group are called old working manpower or less utilizable because people in this age group normally become physically or mentally weak. Yet more than two third males were on work and only 27.80 % males of

this age group were non-workers; though this was not the case in female category. The higher percentage of male workers in this age group indicates that even in old age they have to work to support their dependents in their households. It is also a fact that most of them work only in the agricultural economic functions.

From the above it is clear that the number of labour force in both sexes engaged in different economic activities of the Block were largest in the more active working age group (15 - 34). But the participation rates of labour force and working force per 100 males and females were higher in the working age group of 35 - 59 . It means that the people of this age group contribute more labour power resources in the area. The main reason behind this is that the number of non - workers is more in other age groups because of children below fifteen years of age and students of colleges and universities in 15 - 34 years of age and because of physically and mentally weak people above 60 years of age.

But so far the matter of female labour force participation rate is concerned, it is regretted that more than two third females of working age groups were in the category of non - workers and become

dependents upon the working force. This is a great problem which always influences adversely the economic and cultural growth of the eara.

Crude Labour Force Participation Rate :- Table - 4.9 shows the crude labour force availability and working force participation rate for the Block as a whole. There were 1043 (52.81 %) males and 219 (13.20 %) females in the category of labour force and 938 (47.49 %) males and 188 (11.33 %) females in the category of working force. Economically active unemployed, the work seekers, were 105 (5.32 %) males and 31 (1.87 %) females.

TABLE - 4.9

Crude Labour Force Participation Rate (1984)

Total Population		Total Labour Force		Total Working Force		Total Work Seekers	
M	F	M	F	M	F	M	F
1975	1659	1043	219	938	188	105	31
		(52.81)*	(13.20)	(47.49)	(11.33)	(5.32)	(1.87)

Source : Author's Survey, 1984.
* : Bracketed lower figures indicate the percentages to total male or female population.

From the table it is evident that in 1984 only 47.49 % of the male population and 11.33 % of the female population were actually on work in the various economic activities. 52.51 % of the males and 88.67 % of the females were in the category of non-workers in which 5.32 % males and 1.87 % females were economically active as they were seeking work.

Education and Sex Specific Labour Force Participation Rate :- Table - 4.10 exhibits education and sex specific labour force and working force participation rate in the year 1984. Education has been classified into four levels such as Illiterate, Below Matriculate, Matriculate and Above, and Professional/Technical.

From the Table - 4.10 it can be concluded that the general trend of labour force availability rate per 100 males and females increases with the increasing levels of education, the only exception being the females below matriculation level. It can, therefore, be said that higher the education, higher is the labour force availability in the rural economic sectors in the area. The labour force availability rate is highest in the professional/Technical level of education and lowest in illiterate category of males. But the lowest availability rate in female category

is in the below matriculate level of education, which indicates that most of the females of this educational level do not take part in the agricultural and non - agricultural economic functions in the Block. The reason behind this is that most of the females of this educational levels belong to the middle class in the society and their parents or husbands do not allow them to take any type of job. It is mainly due to their cultural inhibitions. Usually they send their daughters only to the nearby schools mainly from the view that education will help in getting their married in good families.

But workers participation rate is not so because the first three levels of education in male category show the decreasing trend while the professional/ technical level of education in both sexes show highest percentage in both the agricultural and non - agricultural sectors.

The category of economically active unemployed human resources (part of the labour force) shows that the percentage of males seeking work is highest among the persons with education up to matriculation and above, while among the females the highest percentage of work seekers is among those with

TABLE - 4.10

Education and Sex Specific Labour Force Participation Rate (1984)

Levels of Education	Total Population		Labour Force Availability		Workers Participation Rate		Work Seekers	
	M	F	M	F	M	F	M	F
Illiterate	865	1253	420 (48.56)*	182 (14.53)	420 (48.56)	180 (14.37)	-	2 (0.16)
Below Matriculate	877	385	429 (48.92)	23 (5.97)	402 (45.84)	6 (1.56)	27 (3.08)	17 (4.41)
Matriculate and Above	191	16	152 (79.58)	9 (56.25)	85 (44.50)	1 (6.25)	67 (35.08)	8 (50.00)
Professional/ Technical	42	5	42 (100)	5 (100)	31 (73.81)	1 (20.00)	11 (26.19)	4 (80.00)

Source : Author's Survey, 1984.

* Bracketed lower figures in the cells are percentages to total male or female population under respective educational levels.

professional/technical education. The high percentage in males is due to the fact that most of the boys belong to the middle class in the society who are unable to obtain further higher education. They always think of getting quickly in some job to earn their living . Their parents also compel them to seek jobs just after passing the school education. This is the common attitude of the people in the area. But the reason for high percentage in the female category is their skills and their interest, attitude and motivation to get jobs in the governmental or non - governmental institutions.

There is decreasing trend in the percentage of female work seekers and that is from higher to lower educational level . But this is not the case in the percentage of male work seekers. The highest percentage is in the educational level of matriculate and above, higher in the professional/technical and lowest in the below matriculation level.

It can generally be said that the percentage of both sexes seeking work is higher in the higher level of education which become an indicator of human resources potential. This trend also indicates the possibility of shifting of manpower from agricultural to non agricultural economic functions of rural economy.