

**K. N. S. Yadava and Shri Kant Singh**

# Population Diversity and Internal Migration: Testing the Lee Theory

## 1. Introduction

FOR the last few decades, the importance of internal migration has been recognised by authors of a number of developed and developing countries in various stages of socio-economic, cultural and political development. In the late 19th century Ravenstein (1885, 1889) postulated a number of laws of migration based on data obtained from more than twenty countries, including the data of the British census of 1881. His two papers of 1885 and 1889 formed the starting point for both empirical and theoretical work in migration that continues to be relevant even today. For example, Zipf's gravity (1946), Stouffer's opportunity (1940) and intervening opportunity (1960) hypotheses were influenced by Ravenstein's theories. To the best of our knowledge, however, researchers who have formulated models based on these hypotheses are not unanimous in their judgement of what is the best migration model. The reasons for this are that the gravity type models overestimate migration at short distances and underestimate it at longer ones, whereas operational definitions of 'opportunity' and 'intervening opportunity' become problematical in testing Stouffer's theory, Ravenstein's first law relating to migration and distance has been tested by a number of authors over a period of more than 50 years. With the passage of time it has, however, become evident that Ravenstein's other law of migration is an empirical generalization. Therefore, investigation of motivating forces is necessary, not just in terms of personal motives but also in terms of social, economic, demographic, cultural and political factors if migration is to be further explained at micro-levels i.e. at the societal level [Krishna Kumari, 1980]. In this connection

Lee (1966) was perhaps the first person to critically review Ravenstein's laws of migration and put several generalised concepts of migration into a coherent set of rules, especially in regard to the volume of migration and the characteristics of the population concerned. One of his important rules states that "the volume of migration varies with the diversity of people"; that is populations, homogenous in terms of various socio-economic and other characteristics are less prone to experience migration. Naturally diversity is present in every society on account of the differing socio-economic, cultural and political patterns within the aggregate that makes up the society. For example, social and economic power is not uniformly distributed among all the households in a particular village or among all villages of a particular locality. Because of this the degree of discrimination varies from place to place perhaps more in the developing than in the developed regions. Infact such heterogeneity leads to in and out migration from a given community. However, Lee's law is very vague in the sense that in different situations population diversity can be either the cause or the effect of migration. As Lee himself has pointed out, ethnic diversity is caused because of large number of workers moving in to take up specialized work, while at the same time specialization results from diversity in population composition occasioned by the requirement of a more complex occupational structure (Krishna Kumari, 1980). Nevertheless, the law generally holds in the sense that it has relevance to spatial and temporal dimensions even though it is often difficult to state whether heterogeneity is the cause or the effect of migration.

Very few attempts have so far been made to test the validity of Lee's law relating to volume of migration and diversity. Krishna Kumari (1980) tested this law by analysing the Indian census data of 1961 in terms of ethnic, educational and occupational diversity. Her conclusion was that this law should be accepted with certain modifications. The fact, however, is that the census data, particularly that of earlier censuses, have a number of limitations. Firstly, they are completely silent on the whole questions of what motivates migrants to go to cities (Kothari, 1980; Nair, 1986 and Singh, 1986). Most of census studies do not give any clue as to the occupational or other socio-economic characteristics of the non-migrant population at origin. Consequently, sample survey data may give a better understanding of the motives for migration (Banerjee 1986). Secondly, the explanations proffered by macro-level studies based on net or gross migration flows become relevant only at the aggregate levels. Such findings can not account for the tremendous regional and local heterogeneity that prevails in a regional economy nor do they explain migration movement patterns. In the light of this situation, the present paper aims to test Lee's theory by using household and village level data collected from the rural areas of eastern Uttar Pradesh and to investigate factors influencing recent rural out-migration.

## The Study Area

At the outset, we note some fundamental characteristics of the study area. This area has long been noted for its high population density and low per capita income. Out-migration from this area is of considerable demographic, economic and social significance; there is a general feeling among the people of this area that they can improve their socio-economic status by moving to urban centres where there is a high likelihood of finding employment (Singh and Yadava, 1981). The reasons underlying this general view are increasing educational levels, increasing population pressure on stagnant land and local scarcity of job opportunities. Most of the migration occurs due to economic reasons but many other related factors such as education or the need to accompany other family members who have migrated also exist.

Both mathematical and empirical procedures have been used to study the effect of various factors on migration. Among them, regression techniques which enable exploratory analysis of the significance of numerous factors in the act of migration have been found to be an important tool for prediction and policy implications. In the present paper simple and multiple regression analyses are used to examine Lee's law; population diversities considered relate to four factors, viz, caste, education, occupation and economic status.

## 2. The Data

The data for this study are taken from a survey entitled "Rural Development and Population Growth (RDPG)—A Sample Survey 1978" conducted during March-October, 1978, from the rural areas of Eastern Uttar Pradesh in India. The main objective of the survey was to study the existing levels of fertility, mortality and migration in three types of villages representing different levels of social and economic development. The three groups of villages have been termed as "Semi urban", "Remote" and "Growth Centre" villages. Semi-urban villages are the nearby villages of Varanasi city (Varanasi is a district of Eastern Uttar Pradesh), while remote villages are those situated at a comparatively larger distance from the city. The growth centre villages are those where recently new household and other types of industries have been established. A random selection of 8, 6 and 5 villages was done from those belong of these three types, respectively. The survey included all of the 3574 households from these 19 villages.

The data from the selected households were collected by the personal interview method. The information on household structure, household facilities, migration, commutation, fertility, mortality and morbidity was obtained from each household. The information on migration could successfully be included by adopting a "modified definition" of a household. A household

has been defined as a group of people who usually stay together and share a common kitchen, inclusive of persons usually living outside the village but claiming to belong to the respective-households. Such people are generally migrants who go away to earn their livelihood but maintain contact with the household visiting it at regular intervals. Naturally, migration of households as such is not included here. However, the migration of an entire household is very rare in the study area (Singh and Yadava, 1983; Sharma, 1984). In the survey, information regarding both males and females was collected but because of the very small number of female migrants, this study has been limited exclusively to male migrants aged 15 years and above,

### **3, Explanatory Variables and Hypotheses**

In the sample data, about 95 percent of households were Hindu and the rest muslim. There were several villages all of whose households were Hindu. As a consequence of this, a study of the relationship between religious diversity and migration was not possible. Nevertheless Hindu households were divided into as many as 35 caste\* and so this variable has been included in the present study. So far as the place of destination is concerned, several studies have reported that migrants proceed to those places where people of their own ethnicity or caste are already residing, the reason is that migrants of the same faith and/or culture are welcomed, fed and sheltered, at least in the initial period of adjustment (Krishna Kumari, 1980; Singh and Yadava, 1981 and Singh 1985). A number of Indian studies (e g, Sharma. 1984; Singh and Yadava, 1981 and Yadav, 1977) have reported a higher rate of migration from villages or localities that have a higher proportion of households belonging to upper caste groups. These studies have noted the fact that the upper caste households are mostly literate and economically strong with a higher proportion of joint families. On the other hand, some other studies (e g. Singh, 1986 and Yadava, 1987) found no significant difference in migration rate among different caste-groups and report a slightly higher rate of migration from households belonging to the muslim and business castes. Thus at both end of the caste-spectrum we have a comparatively higher incidence of migration. In some situations, however, the caste factor may not play as significant a role in migration as affluence (Krishna Kumari, 1980 and Singh, 1986). There are extreme cases where the households belonging to the middle level agricultural caste-groups predominate; they record migration rates lesser than expected. (Sharma, 1984; Singh and Yadava, 1981). Thus, we may have a negative relationship between migration and caste diversity in some cases and

**\*Caste is an important determinant of socio-economic, cultural and political diversities within villages of India.**

a positive one in other cases. We, therefore, hypothesize that there is a curvilinear relationship between migration and caste-diversity.

Our second hypothesis is that there exists an inverse relationship between migration and the economic diversity of people at origin. This is due to the fact that the majority of the economically better-off households of a village tend to send their children to the better schools for advanced study which are mostly located in urban areas (Caldwell, 1968; Yadava, 1987) and also because the majority of the members of the economically-depressed tend to move out in search for employment (Greenwood, 1971; Mukherjee, 1975 and Singh, 1986). At both ends of the caste-spectrum we have a lower diversity but a higher rate of migration. A second justification for such a hypothesis is that pattern of land ownership, characterised by a large measure of inequality, is about the same for all villages. A major share of land remains in the hands of the upper castes even though they usually do not cultivate the land themselves but keep labourers for that purpose; they get their sons and daughters educated by sending them to urban areas. On the other hand, many households, particularly those belonging to the muslim and business castes have little or no land. The members of these families do not involve themselves as agricultural labourers either, but prefer to migrate to urban areas (Banerjee, 1986; Sharma, 1984 and Yadav, 1987). Thus in both the groups we again have low economic diversity but a high rate of out-migration.

The Indian educational system like those of many other developing countries, is oriented towards producing whitecollar workers. It is necessary for these people to migrate to urban areas, where jobs are concentrated. The chances of obtaining employment in any given area are much higher for the educated person than for the less educated. It has been observed that people with a high standard of education take little interest in manual (agricultural) jobs in villages, as they feel that by engaging in such work their standard would be lowered (Yadava, 1987). Thus if the level of education of the households is high and such households predominate the village, there would be a high rate of migration, the opposite would also hold. In the Indian context with overall low levels of literacy and education, we may assume a positive relationship between out-migration and educational diversity.

Several studies (e.g. see Krishna Kumari, 1980) have shown a positive relationship to exist between occupational heterogeneity and in-migration. It has been argued that occupational diversity is indicative of diversity of economic activity and predictive of the potential for occupational opportunities within a community. Although agriculture was the dominant occupation in the study area there were other occupations like non-crop husbandary (dairying, poultry, forestry and fishing), small scale cottage and household industries and government or semi-government jobs such as school teachers etc. In this

situation we may posit a positive relationship between migration and occupational diversity.

#### 4. Migration and Diversity Indices

##### 4.1 Migration

This study deals with the male migrants > 15 years of age and over. The volume of migration has been computed as the ratio of the number of migrants to the total population, i.e. migration index  $I$  (say) is defined as

$$I_i = \frac{M_i}{P_i} \times 100$$

where  $I_i$  is the migration score or index for the  $i$ th village ( $i = 1, 2, 3, \dots, 19$ )  $M_i$ , the number of migrants from the  $i$ th village and  $P_i$ , the total population of the  $i$ th village. It may be mentioned that the volume of migration is measured with respect to the place of origin. The migration score for all 19 villages is given in column 2 of Table 1. It should be observed that the migration index varies from 1.47 to 11.44, yielding 5.80 percent as the average migration rate for the villages under study.

##### 4.2 Diversity

Diversity or heterogeneity in the population is computed by using Lieberman's diversity index as follows:

If  $C_i$  ( $i = 1, 2, 3, \dots, n$ ) denotes the proportion of individuals in the  $i$ th sub-class such that  $\sum C_i = 1$ , then Lieberman's index of diversity  $D$  (say) is defined as

$$D = 1 - \sum_{i=1}^n C_i^2, \text{ where } \sum C_i^2 \text{ gives up persons'/individuals of the same charac-}$$

teristics if successive selections are made. Theoretically the diversity index varies from 0 to 1. It is zero in case of perfect homogeneity and 1 if every individual of the community possesses a different characteristic.

Diversity indices for caste, economic status, education and occupation are given in Table 1. It was found that caste diversity varies from a minimum score of 0.168 to a maximum score 0.806 This shows that the villages under study vary a great deal among themselves with respect to caste. Economic diversity shows a picture of identical distribution for all villages where diversity varies over a small range of 0.706 to 0.792. A more or less similar pattern in the case of educational diversity is also observed with a minimum score of 0.684 to a maximum score of 0.802. Occupational heterogeneity also indicates

TABLE 1—POPULATION DIVERSITY AND VOLUME OF MIGRATION IN DIFFERENT VILLAGES

<i>Village No. X</i>	<i>Migration Y</i>	<i>Population Characteristics</i>			
		<i>Caste (x<sub>1</sub>)</i>	<i>Economic Status (x<sub>2</sub>)</i>	<i>Education (x<sub>3</sub>)</i>	<i>Occupation (x<sub>4</sub>)</i>
(1)	(2)	(3)	(4)	(5)	(6)
X <sub>1</sub>	3.82	0.704	0.723	0.715	0.670
X <sub>2</sub>	2.57	0.739	0.769	0.732	0.637
X <sub>3</sub>	1.95	0.595	0.777	0.737	0.653
X <sub>4</sub>	6.58	0.722	0.724	0.762	0.743
X <sub>5</sub>	8.45	0.604	0.706	0.774	0.725
X <sub>6</sub>	2.30	0.168	0.755	0.743	0.645
X <sub>7</sub>	2.86	0.477	0.746	0.701	0.543
X <sub>8</sub>	2.65	0.615	0.763	0.754	0.554
Y <sub>1</sub>	1.47	0.707	0.738	0.761	0.593
Y <sub>2</sub>	8.16	0.586	0.780	0.780	0.605
Y <sub>3</sub>	8.51	0.635	0.722	0.802	0.689
Y <sub>4</sub>	11.44	0.751	0.762	0.752	0.701
Y <sub>5</sub>	9.47	0.708	0.725	0.755	0.752
Y <sub>6</sub>	7.53	0.590	0.774	0.690	0.687
O <sub>1</sub>	10.17	0.806	0.753	0.720	0.700
O <sub>2</sub>	5.56	0.759	0.781	0.722	0.623
O <sub>3</sub>	2.40	0.555	0.792	0.700	0.581
O <sub>4</sub>	8.97	0.735	0.740	0.684	0.696
O <sub>5</sub>	5.30	0.765	0.762	0.693	0.672

that most of the villages are homogeneous where diversity index varies from 0.543 to 0.752, In the case of the later three variables, Table 1 indicates that the lower half of the range of diversity (i.e. below 0.5) is without a single village, which is a serious handicap for the study The educational diversity clearly shows an uniformly limited progress achieved by the villages towards educational improvement, a pattern consistent with findings reported from a number of other states (Krishna Kumari, 1980). A caste diversity does not

in the main exhibit a greater clustering at the upper and lower ends of the spectrum and villages were found to be more or less evenly distributed over the entire range with a high clustering around the mean.

TABLE 2-CORRELATION MATRIX SHOWING SIMPLE CORRELATION COEFFICIENTS BETWEEN MIGRATION INDEX AND HOMOGENEITY VARIABLES

	Y	x <sub>1</sub>	x <sub>2</sub>	x <sub>3</sub>	x <sub>4</sub>
y	—	—	—	—	—
X <sub>1</sub>	0.415	—	—	—	—
X <sub>2</sub>	-0.286	-0.102	-	—	—
x <sub>3</sub>	0.185	-0.072	- 0.382	—	—
x <sub>4</sub>	0.695	0.341	-0.529	0.161	—

### 5. Analysis and Results

A correlation matrix (see Table 2) indicates a positive correlation between migration (index I) and the diversity indices with respect to caste (+ 0.415), education (+0.185) and occupation (+0.695) and a negative correlation (- 0.286) between migration and economic diversity. Although the type of relationships observed with respect to economic status, education and occupation establish the hypotheses stated earlier, the correlation between caste and migration needs further examination regarding its curvilinearity. However, only the occupational diversity is found to be significantly correlated with the volume of migration at the 5 percent level.

To study curvilinearity in these data, which is worthwhile as diversity scores are clustered between a certain range of diversity, data are truncated at some stages and regression analysis is repeated. The findings are given in Table 3. It may be observed that in the case of caste positive regression coefficients were found throughout the repeated regression analyses, showing a definite linear positive relationship between the volume of migration and caste diversity.

As hypothesised, the regression analysis between economic status and migration indicates a definite negative relationship between the volume of migration and economic diversity. Such a relationship between migration and economic heterogeneity shows a different pattern from that posited by Lee as a general rule. The negative regression coefficients obtained here indicate that greater economic diversity, perhaps, hampers out-migration from villages.

The repeated regression analysis shows a positive relationship between migra-

tion and education diversity. Krishna Kumari (1980) reported an inverted 'U' shaped relationship between education diversity and migration at the all India level and noted a positive slope at lower values of diversity and a negative at higher values. This may be due to the fact that her data was based on net migration flows.

The regression coefficients are found to be statistically significant in the case of migration and occupation, except at lower values of occupational heterogeneity where a negative slope resulted in an insignificant coefficient. This indicates that a more or less positive relationship exists between migration and occupation diversity, which establishes as hypothesised, that the greater the occupational heterogeneity in a village, the greater the likelihood of there being out-migration from that village. This pattern is consistent with the findings of Krishna Kumari (1980) explained at the all-India level in the case of out-migration within the state. The present study shows that the existence of non-agricultural occupations in villages is the primary stage of out-migration. This is because occupations other than agriculture are not viable in a rural setting. As the area under study is not the one where migrants are absorbed—the place in which, as noted above, this theory has the greatest relevance — our data support the proposition that migration enhances diversity, which in turn tends to more out-migration.

A combined effect of the four variables on migration has also been examined through a multiple linear regression model. The multiple regression equation is given below :

$$Y = - 46.974 + 4.700x_1 + 20.347x_2 + 14.481x_3 + 36.252x_4$$

$$(4.355) \quad (30.234) \quad (19.039) \quad (12.034)$$

where  $Y$  denotes the migration index  $I$ ;  $X_1$ ,  $X_2$ ,  $x_3$  and  $x_4$  denote the caste, economic, education and occupation diversity scores respectively. The values in parentheses are standard errors.

A surprising and interesting result of multiple regression analysis is that the coefficient of variable  $x_2$ , the economic status is positive. Although the coefficient is insignificant, this finding contradicts what we found earlier. It shows that the volume of migration increases with increase in economic diversity as hypothesised in the previous section. Even so, we would not like to make, on the basis of this finding alone, a definite statement about the relationship between migration and economic diversity.

The coefficients of the other three variables, caste, education and occupation show a similar trend as observed earlier. However, the coefficients are not statistically significant except for the one of occupational diversity. All the four variables combined together account for 55 percent of the variation in migration. The maximum percentage of variation in migration (48%) was accounted for by occupation. The next highest contribution in  $R^2$  is that of

TABLE 3—SIMPLE REGRESSION EQUATION RELATING TO DEPENDENT  
VARIABLE K (MIGRATION INDEX) AND INDEPENDENT  
VARIABLES X (THE FOUR DIVERSITY INDICES)  
ABOVE THE TRUNCATED POINTS

<i>Diversity above truncated points</i>	<i>Sample size</i>	<i>Simple Correlation</i>	<i>Regression equation</i>
<b>For Caste</b>			
0.75	04	+ 0.221	$Y = - 13.578 + 28.167 x$
0.70	10	+ 0.414	$y = - 25.749 + 43.615 x$
0.60	13	+ 0.182	$y = - 0.328 + 9.646 x$
0.00	19	+ 0.415	$y = - 0.193 + 9.315 x$
<b>For Economic status</b>			
0.77	05	- 0.475	$y = 143.232 - 190.000 x$
0.75	11	- 0.244	$y = 43.425 - 63.511 x$
0.73	14	- 0.061	$y = 1.759 - 9.162 x$
0.70	19	- 0.286	$y = 22.686 - 37.867 x$
<b>For Education</b>			
0.77	03	+ 0.582	$y = 3.375 + 6.364 x$
0.74	09	+ 0.367	$y = - 49.497 + 73.295 x$
0.71	14	+ 0.297	$y = - 25.176 + 41.447 x$
0.68	19	+ 0.185	$y = - 72.331 + 106.211 x$
<b>For Occupation</b>			
0.70	05	- 0.674	$y = - 46.615 - 51.635 x$
0.65	11	+ 0.582*	$y = - 29.905 + 53.480 x$
0.60	15	+ 0.537*	$y = - 19.122 + 38.008 x$
0.50	19	+ 0.695*	$Y = - 18.482 + 36.998 x$

\*Significant at the 5 percent level.

caste, followed by education. Economic status makes a very small contribution of about 0.6% in  $R^2$ .

Interestingly, a significantly negative correlation coefficient ( $-0.529$ ) is observed between economic and occupational diversities (see Table 2). This indicates that increasing diversity in economic status leads to a concentration of people in certain occupational categories. On the other hand, a lower and insignificant positive correlation ( $0.161$ ) between education and occupation is contrary to the expectation of a high correlation between the two.

## 6. Conclusion

Micro level village data was utilized to test Lee's general theory of migration which states that there is a direct relationship between volume of migration and population heterogeneity. It was observed that while caste, education and occupation have linear relationships to migration, the relationship between economic status and migration is of a fluctuating nature. Of all the variables studied, occupation was found to be the most important factor accounting for migration from the study villages. Thus, the present study which has been based solely on out-migration from the place of origin, shows that Lee's theory is, by and large, acceptable. However, in order to make any generalization at the national level, more sample studies in other parts of country should be conducted.

## References

- Banerjee, B., 1986, *Rural to Urban Migration and the Urban Labour Market*, Delhi : Himalaya Publishing House.
- Bilsborrow, R. E., McDevitt, T. M., Kossoudji, Sherrie and Fuller, R., 1987, Impact of origin community characteristics on rural-urban out-migration in a developing country, *Demography*, 24(2), 191-210.
- Caldwell, J. C., 1968, Determinants of rural-urban migration in Ghana, *Population Studies*, 22, 334-77.
- Greenwood, M. J., 1971, A regression analysis of migration to urban areas of less developed country : the case of India, *Journal of Regional Sciences*, 11, 253-62.
- Kothari, O.K., 1980, Pattern of rural-urban migration : a case study of four villages in Rajasthan. India, *Ph.D. thesis in Demography*. ^The Australian^ National University, Canberra.
- Krishna Kumar, K., 1980, Population heterogeneity and internal migration, *Demography India*, 9, 82-94.
- Lee, Everett, S., 1966, A theory of migration, *Demography*, 3, 47-57.
- Lieberson, S., 1969, Measure of population diversity, *American Sociological Review*, 34, 850-62.
- Montague, M. M., 1978, Internal migration and an Australian rural community, *Ph.D. thesis of Anthropology*, University of Queensland, Australia.
- Mukherjee, Shekher, 1975, The mobility theory of human spatial behaviours : a behavioural approach to study migration and circulation in the Indian situation, *Ph.D. thesis*. The Graduate Division of the University of Hawaii, Honolulu.

- Nair, P. S., 1986, The data base for migration analysis in India, paper presented in the *National Seminar on Migration Research in Context of Development*, 9-11 August, Banaras Hindu University, India.
- Ravenstein, E. O., 1885, The laws of migration. *Journal of the Royal Statistical Society*, 48, 167-235.
- Ravenstein, E. G., 1889, The Laws of migration, *Journal of the Royal Statistical Society*, 52, 241-305.
- Sharma, L., 1984, A study of cut-migration from rural areas of Varanasi, *Ph.D. thesis in Statistics*, Banaras Hindu University, India.
- Singh, S. R. J., 1985, A study of rural cut-migration and its effect on fertility, *Ph.D. thesis in Statistics*, Banaras Hindu University, India.
- Singh, R. B., 1986, A study of migration pattern from rural areas, *Ph.D. thesis in Statistics*, Banaras Hindu University, India.
- Singh, S. N. and Yadav, K. N. S., 1981, On some characteristics of rural cut-migration in Eastern Uttar Pradesh, *Society and Culture*, 12 1983.
- Stouffer, Samuel A., 1940, Intervening opportunities : a theory relating mobility and distance, *American Sociological Review*, 5, 845-57.
- Stouffer, Samuel A., 1960, Intervening opportunities and competing migrants, *Journal of Regional Sciences*, 2, 1-26
- Yadava, K. N. S., 1977, Some aspects of cut-migration and its effects on fertility, *Ph.D. thesis in Statistics*, Banaras Hindu University, India.
- Yadava, K. N. S., 1987, Differentials, selectivities and determinants of rural-urban migration in India, *Seminar paper presented in the Department of Demography*, The Australian National University, Canberra
- Zipf, G. K., 1946, The  $PIP_a(D)$  hypothesis of the internal movement of persons, *American Sociological Review*, 11, 677-686.

## APPENDIX

### The Caste Factor in Households of Villages

In rural areas, caste is an important determinant of occupation, education and social status in the community and it may, therefore, be one of the important factors responsible for migration. In the area under study, approximately ninetyfive per cent of households are Hindu belonging to about 35 castes. Keeping in view the total number of households, these castes were grouped into five categories on the basis of homogeneity in the pattern of living and the relative importance of the caste in the area. Although, a type of caste system also prevails in Muslim society, this community was treated as a 'single group' since their number was not sufficiently large for any further grouping. The caste groups were determined as :

- I. Upper Castes : Kshatriya, Bhumihar, Brahmin, Kayastha, Brahmohatta, Gosain, Mahabrahmin.
- II. Middle Castes : Kurmi, Koin, Ahir, Gareria
- III. Business Castes : Bania, Teli, Thatbera, Sonar, Kalwar, Halwai, Barai.
- IV. Functional Castes : Kohar, Kahar, Lohar, Nai, Mali, Mallah, Bind, Nonia, Rajbhar.
- V. Scheduled Castes : Chamar, Khatik, Dharkar, Dhobi, Nat, Pasi, Bhangi, Musahar.
- VI. Muslims

### **Economic Status of Households**

In most studies economic status of households tends to be measured with the help of per capita income. However, it is a well known fact that income data, especially that obtained from rural areas, are not particularly reliable. Keeping this fact, in mind it was decided to define the economic status of households by also taking into account a number of other factors highly correlated with the economic condition of household apart from per capita income. In the present survey, the economic status of households was computed by taking into consideration the following five factors :

- (i) Per capita income,
- (ii) Type of house,
- (iii) Possession of prestigious goods in the household,

- (iv) Consumption of milk, and
- (v) Consumption of vegetables.

Appropriate scores were given to the above factors and the total score taken to represent the economic status of a household, The scores assigned to the above five factors varied from 0-60, 0-15, 0-5 and 0.5 respectively. Thus, the total score could theoretically vary from 0 to 100. On the basis of these scores the households were classified into five major groups as below :

<i>Economic status group</i>	<i>Score</i>
1. Low	< 24
2. Lower Middle	25 — 34
3. Middle	35 - 44
4. High	45 - 64
5. Very High	> 65

#### Educational Status of Households

The educational status of a household was determined by taking into account the average educational level of the members of the household as well as the highest educational level obtained by the most educated member of the household. For computing educational status, only males of fifteen years and above were included. Appropriate scores were given to the educational level of each member included and the average of these scores was taken to represent the average educational level of the household. Similarly scores were also given for the educational level obtained by the highest educated member of the household, and total of the two scores taken to represent the educational status of the household. The scores were given in such a way that the total score would range from 0 to 10. On the basis of these scores the households were classified into five educational status groups as under :

<i>Educational status group</i>	<i>Score</i>
1. Low	0— 0.99
2. Lower Middle	1 - 2.99
3. Middle	3 - 4.99
4. High	5 - 6.99
5. Very High	7 and above.

#### Main Occupation of Households

The information regarding the main occupation of the households (the main occupation of a household is defined by taking into consideration the

main source of income of the household) was considered along with other demographic, social and economic variables. In order to obtain a significant number of observations in each cell for the purposes of the present study, the households were classified into 4 categories as follow :

1. Those solely dependent on own agriculture,
2. Those with members who are agricultural or other types of labourers,
3. Business (including household industry),
4. Service (private or government).