In this chapter, methodology, objectives, hypotheses, limitations and tools and
techniques of data analysis have been discussed. Data and variables used in the
study have also been discussed separately. As is obvious from the literature
reviewed in Chapter 2, both theoretical and empirical studies are available on
the theme. Some researchers have developed theoretical models to explain the
phenomenon of rural-urban migration (for instance, Todaro model of
migration). Empirical studies have also been conducted to identify the causes,
consequences and factors affecting the rural-urban migration. To conduct a
scientific and systematic study on any aspects requires a well- defined
objectives and clean-cut hypotheses to be tested with the support of analysis of
data using appropriate statistical tools. Keeping these in view, this chapter is
devoted to the issues.

3.1 OBJECTIVES OF THE STUDY

Though a number of studies are available on the various aspects of migration,
only a few of them are related to the rural-urban migration in Uttar Pradesh.
This research study examines the trends, dimensions and determinants of
migration in UP. The specific objectives of the study are:
• To analyze the trends in rural–urban migration in U. P.
• To assess the impact of push and full factors on rural-urban migration.
• To examine the composition and dimensions of the rural-urban migration.
• To study the gender and regional patterns of rural-urban migration.
• To study the interrelationship between development and migration.
• To study the main consequences of rural-urban migration.
• To suggest policy options for controlling unwarranted inflows of rural workforce in urban areas and generating income and employment earning activities in the rural areas.

3.2 HYPOTHESES

The following hypotheses are contemplated to be tested in the Study:

• The scarcity and low productivity of cultivated land with less irrigation facility in rural areas is the main push factor in rural-urban migration.
• Below subsistence level economy of the regions encourage the rural youths of villages to migrate in urban areas.
• High degree of urbanization and 'City bright light effect' both are the main pull factors for migration of people from the rural areas to urban areas.
Lacks of sufficient infrastructure facilities in the rural areas are the main push factor in the out-migration.

Incidence of rural-urban migration is high in economically backward regions of the State.

3.3 METHODOLOGY

This study is mainly based on secondary data collected from population censuses, NSSO reports and statistical abstracts of Government of Uttar Pradesh. District-wise information on migration and the related aspects have been collected for the last two decades. The study covers all the 70 district of the State. The collected data are classified by region, gender and social groups to examine variations in the rural-urban migration across regions and groups. Apart from these, the rural-urban migration is also be classified by occupation and level of education.

The first part of study is concerned to analysis the trends of migration in the State. There are different channels of migrations as rural-urban migration, urban-urban migration, urban - rural migration and rural - rural migration. All the channels are analyzed in this part. For analyzing the trends of migration, data are collected from 1991 and 2001 censuses conducted by the Registrar General of India. Migration Tables (D-Series) in the population census include data on various facets of migration.
Impact of various determinants of rural-urban migration has been assessed by applying regression models. Economic factors explaining rural-urban migration are categorized as “push” and “pull” factors. Push factors are those that operate in areas of out-migration and compel the people to move to other areas. Pull factors are those that operate in areas of in-migration and attract the people to these areas. It is not necessary that in an area only push or pull factors should operate, in fact, both push and pull factors operate simultaneously in the same area.

The data are collected on variables such as rural literacy, urban literacy, average farm size, farm mechanization, population density, Percentage of village electrified, length of pucca roads, net irrigated area as percentage of net sown area, level of urbanization measured as the proportion of urban to total population, employment in non-household manufacturing in both rural and urban sectors, employment in the urban tertiary sector, mechanization, per capita net area sown, etc.. These variables, then, are be grouped as “push” and “pull” factors to identify which factors—push or full—are more dominating in different regions of the State in causing variation in the out-migration from the rural area. Regression analysis has also been done separately for total rural—urban migration and rural-urban migration of workers. A pooled regression analysis is also conducted by pooling the cross-sectional data of 70 districts for two time points, i.e., 1991 and 2001.
3.4 DATA & VARIABLES AND STATISTICAL TOOLS

Apart from using simple statistical tools such as averages, percentages, Standard deviation, graphs, pooled regression analysis has been applied to analyse the factors accountable for rural-urban migration. The functional form of the model is:

\[ \frac{RUM_T}{RUM_W} = \alpha + \sum_{i=j}^{n} \beta_i X_{ij} + \mu_j \]

Where:

- \( j \) stands for districts;
- \( i \) for exogenous variables;
- \( RUM_T \) for rural to urban migration as percentage of total urban population;
- \( RUM_W \) for rural to urban migration of main workers as percentage of total urban main workers;
- \( \alpha \) and \( \beta_i \) are parameters to be estimated; and
- \( \mu_j \) is the random unobserved disturbance with zero mean and a constant variance.

After getting insights from earlier studies, six exogenous variables are finally identified to explain the variation in \( RUM_\) and \( RUM_W \). They are:

- \( R_{NHM} \) = Percentage of rural workforce engaged in non-household manufacturing.
- \( R_{HM} \) = Percentage of rural workforce engaged in household manufacturing.
U_NHM = Percentage of urban workforce engaged in non-household manufacturing
U_HM = Percentage of urban workforce engaged in household manufacturing
UT = Percentage of urban workforce engaged in tertiary sector.
RT = percentage of rural workforce engaged in tertiary sector
NSA_RW = Net sown area per rural worker.
RLIT = Rural literacy rate.
NIA = Net Irrigated Area as percentage of Net Sown Area.
Elect_V = Percentage of villages electrified
URB = Urbanisation
CI = Cropping Intensity
Trac = Number of tractors per 1000 hectares of NSA
PUCCA_R = Length of pucca road per lack population
D1 = Dummy for 2001 Census (2001 =1; 1991 =0)
D2 = Dummy for Eastern region (ER =1; o otherwise)

The detail of variables is given in Chapter 5. Before fitting the regression model, a correlation matrix of dependent and independents variables was prepared to analyse the extent of correlation between different variables and to know the problem of multi-collinearity.

### 3.5 LIMITATIONS OF THE STUDY

The study is mainly based on the secondary data which do not provide household level information about the migration. Household unit level data can
provide vital information about characterizes of migrant workers, size of households and various other socio-economic, demographic and cultural factors that affects migration decision. Due to non-availability of household level data, the present study is mainly dependent on the secondary data sources which cannot capture the household level characteristics of the migrant workforce.

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