PG EC S4-02 (DSC)

TWO YEAR MASTER'S DEGREE COURSE

(CBCS in Accordance with NEP 2020)

SEMESTER-IV

DEMOGRAPHY

ECONOMICS

Surya Kumar Bhuyan School of Social Sciences

KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

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COURSE INTRODUCTION

"Demography" is the third course of fourth semester of the M.A. in Economics programme of this University. The third course of fourth semester of M.A. in Economics programme of this University is basically an optional course. Out of the two optional course viz. Econometrics and Demography, learners can opt any one course based on their interest. This course Demography is designed to help the learners to have a deep understanding about various concepts and theoretical perspectives of Demography. Further, the Learners shall have an understanding about the population dynamics of India as well as the North-Eastern Region of India. Various issues and concerns of population growth has also been discussed to develop critical thinking among the learners. Further an analysis of Census 2011 has also been included in two units of the course to give the learners an updated understanding of the trends of population growth in India as well as its North-Eastern Part of India. The last unit of the course attempts to give the learners an overview of the tends of population growth of the whole world. The Course consists of 15 units.

The ninth unit deals with the demographic structure of India . This unit will help you to understand the trends of Indian population growth, composition and occupational structure of Indian population and changing characteristics of Indian population .The tenth unit outlines the population policies of India. The concepts like population policies, various programmes related to population policies and different initiatives taken by government of India to control population have been discussed in this unit.The eleventh and twelfth units shall discuss the demography of North East India.The eleventh unit deals with the demographic structure of North East India and explains the inter-state, inter-community and gender perspectives of North East India.The twelfth unit deals with the demographic problems in North East India and discusses the various issues like poverty, unemployment,child and women trafficking, immigration, inter community feuds and outmigration related to North East India.The thirteenth and fourteenth units deliberate on the Census 2011. This thirteenth unit deals with the issues of Census 2011 with reference to whole Indian population and explains growth, composition and occupational structure of Indian population.The fourteenth unit deals with the issues of Census 2011 with reference to the population of North Eastern Region of India and explains growth, composition and occupational structure of the population of North Eastern Region of India. Apart from it, a comparison is made between the North East Region of India and all India level with respect to census 2011.The final unit deals with the trends in world population and distribution of world population.

While going through the units of the block, you will find that the unit is further divided into certain sections and sub-sections, wherever necessary, for your better understanding. Again, the units carry certain

‘activities’ after certain sections. These “ACTIVITIES” will provide you the opportunity to practically apply your own thoughts based on the knowledge gained from reading the text in a particular section. Besides, in order to give you additional information on certain relevant topics, you will find a category called “LET US KNOW” after the sections in each unit. Another category that has been included at the end of each section of a particular unit is “CHECK YOUR PROGRESS”. The purpose of this category is to help you to asses for yourself as to how thoroughly you have understood a particular section. You may then match your answers with “ANSWERS TO CHECK YOUR PROGRESS” given at the end of each unit. The section “FURTHER READING” in each unit contains the names of a few books which you might want to consult if you are intereted in learning more elaborately about the concepts discussed in a particular unit. Furthermore, the category titled “MODEL QUESTIONS” is intends to provide you a hint of the type of questions you are likely to get in the examination.

UNIT 1 : INTRODUCTION

UNIT STRUCTURE

1.1 Learning Objectives

1.2 Introduction

1.3 Demography: Meaning and Definition

1.4 Nature and Scope of Demography

1.4.1 Demography As a Science

1.5 Origin and Development of Demography

1.6 Relation of Demography with Other Social Sciences

1.7 Importance of Demography

1.8 Let Us Sum Up

1.9 Further Reading

1.10 Answers to Check Your Progress

1.11 Model Questions

1.1 LEARNING OBJECTIVES

After going through this unit, you will able to-

- know about the meaning of demography
- understand the scope of demography
- explain the relationship of demography with other social sciences
- discuss the importance of demography.

1.2 INTRODUCTION

This is the first unit of the course on demography and this unit shall give us a brief overview of the subject of demography. In this unit, we shall be able to learn about the meaning and definitions of demography, the scope of demography, the relationship of demography with other social sciences and also about the importance of demography. Let us first begin with the meaning and definitions of demography which is discussed in the next section.

1.3 DEMOGRAPHY: MEANING AND DEFINITION

Demography,in simple words, is the statistical study of population. The word demography has been derived from two Greek words Demos and Graphy. Demos means 'People' and Graphy means 'Study' which gives us the meaning of demography as the 'Study of People'. It was introduced in the middle of Nineteenth Century. It is a vast subject dealing right from the population size, its composition and distribution to changes occurring in these aspects during a given period of time. It has gained immense importance in the present era due to the relation between economic development and population growth.

Demography helps in identifying the quantitative and qualitative characteristics of human population. Many writers like **William Peterson**, **Hauser** and **Duncan** conclude that "population studies" and "demography" are two different concepts. According to them, 'Demography' plays a minor role and takes into consideration only the decisive factors of population growth but, 'Population Studies' covers not only geographical, political, economic, social, biological factors of population but also the relationship among them.

The basic characteristics of demography are easily traceable. This includes characteristics like age, sex, family status, educational level, income, occupation and race. Demography also takes into account the division of society on the basis of education, nationality, religion and ethnicity. Birth, Death and Migration are considered as the 'big three' of demography. Fertility, Mortality and Migration are therefore considered as the key determinants of population change.

A few definitions of demography put forwarded by different authors and thinkers are given below:

According to **Barckley**, "The numerical portrayal of human population is known as demography." Similarly, **Thomson and Lewis** defined demography as, "The population student is interested in population's size, composition and distribution; and in changes in these aspects through time and causes of these changes."

According to **Hauser and Duncan**, "Demography is the study of size, territorial distribution and composition of population, changes therein, and the components of such changes, which may be identified as natality, mortality, territorial movement (migration), and social mobility (change of status)." According to **Frank Lorimer**, "In broad sense, demography includes both demographic analysis and population studies. A broad study of demography studies both qualitative and quantitative aspects of population." According to **Donald J. Bougue**, "Demography is a statistical and mathematical study of size, composition, spatial distribution of human population, and of changes over time in these aspects through the operation of five processes of fertility, mortality, marriage, migration and social mobility. Although it maintains a continuous descriptive and comparative analysis of trend in each of these processes and its net result, its long run goal is to develop a body of theory to explain the events that it charts and compares."

1.4 NATURE AND SCOPE OF DEMOGRAPHY

The subject demography is sometimes divided for further elucidation into 'formal demography', meaning the formal statistical analysis of population parameters and dynamics, and 'population studies', the wider investigation of the cause and consequences of population structures and change. It is in this latter area that the interests of many demographers overlap those of sociologists, and in sociological investigation, demographic analysis forms an important component in the description and understanding of human societies. The terms 'demography' and 'population studies' are often used interchangeably, but some scholars have tried to distinguish demography from population studies. Demographic analysis is confined to the study of components of population, variations and the changes in it. On the other hand population studies are concerned not only with population variables but also with the relationship between population changes and also with the relationship between population changes and other variables- social, economic, political, biological, genetic, and geographical and the like. But in a broader sense both the terms are used in a similar manner in the academic periphery. In the words of Frank

Lorimer, “In broad sense, demography includes both demographic analysis and population studies. A broad study of demography studies both qualitative and quantitative aspects of population.”

Demography is a branch of social science and covers different aspects. Therefore to understand the scope of demography, one has to go through the following aspects:

- **Subject Matter of Demography:**

  The subject matter of demography includes the following:

  - **Size and Shape of Population:** The population size is generally defined as the total number of person in a particular place at a particular time. A country’s population size and shape keeps on changing from time to time as different tradition, culture, custom, uniqueness, moral values, socio economic conditions, etc. prevailing in that particular country exhibits a great impact in structuring the size and shape of the population.
  - **Birth rate and Death rate related aspects:** Birth rate and Death rate have great influence on the size and shape of the population and hence they play a very important role in this subject matter. Some factors affecting the birth and death rates are marriage rate, beliefs regarding social status and marriage, age of marriage, early marriage and its effects on the health of the mother and the child, child infanticide rate, maternal death, level of medical services, purchasing power of the people, etc.
  - **Population Composition and Density:** The study of composition and density of population is a crucial factor in studying the demography of a particular region. Information relating to factors like sex ratio, religious and linguistic division of population, rural to urban ratio, racial division of population, population per square kilometre, etc. helps in determining the composition and density of population.
  - **Socio- Economic Problem:** To study the demography of a particular region, it is very important to know the socio-economic problems prevailing there. Some important factors

which require attention in respect of socio economic problems are water and air pollution, slum areas, increasing number of crimes, addiction to harmful substances (liquor, drugs, etc.), juvenile crimes, and prostitution, etc.

- **Quantitative and Qualitative Aspects:** Population studies include the study of both quantitative as well as qualitative problem. The qualitative problems which form an integral part of the study of demography are the availability of doctors in the region, number of hospital available, life expectancy at birth, daily consumption level, policies of family planning etc.

- **Distribution of Population:** Demographic study covers the pattern of distribution of people among and within continents, countries and region; the changes in their numbers and composition. It also tries to highlight the economic, political and social causes which bring diversity in the distribution of population.
  - **Migration:** Supply of labour and distribution of population depends to a great extent on the migration rate. The factors which lead to internal as well as external migration of people within a country and between countries, the impact migration has on migrants and the place relating to such migration are studied under demography.
  - **Urbanisation:** Urbanisation has a crucial impact on the distribution of population within the country. Population studies highlight the factors that affect urbanization in a particular area, the problems incurred during urbanisation and their solution thereof.
- **Theoretical Model:** The study of demography also covers the vast theoretical aspects of population studies which consist of various theories put forwarded by sociologists, economists, demographers and biologists.
- **Practical Aspects:** A number of practical aspects are involved in the study of population. They include practical models related to the various methods of measuring population changes like the census,

population projection, age-gender pyramid, etc.

- **Population Policy:** Population policy of the government is also taken into consideration while studying demography, especially in case of developing countries. The population policy includes strategy for family planning and population control, policies for child, and reproductive health and maternal nutrition, etc.
- **Micro vs Macro:** The demography as a subject is related to whether it is a micro or a macro study. **Micro** demography represents the restricted view of population studies. According to **Bogue**, "Micro demography is the study of the growth, distribution and redistribution of the population within community, state, economic area or other local area." Under the micro concept, demography is the study of quantitative relations of demographic phenomena. **Macro** demography covers both qualitative and quantitative aspects. Prof. Bogue has defined macro demography as "the mathematical and statistical study of the size, composition, and spatial distribution of human population and of changes over time is these aspects through the operations of the five processes of fertility, mortality, marriage, migration and social mobility. It maintains a continuous descriptive and comparative analysis of trends, in each of these processes and in their net result. Its long run goal is to develop theories to explain the events that it charts and compares."

1.4.1 Demography as a Science

To know whether demography is a science, first we will have to understand what science is and to what extent demography fulfils the characteristics of science.*A science is a systematised body of knowledge ascertainable by observation and experimentation. It is a body of generalisation, principles, theories or laws which traces out a causal relation between cause and effect.*

The main characteristics of science are:

- It is objective in nature;
- It is verifiable;

- It is based on theories and principles;
- It can be tested by observation and experiments;
- It has predictive ability;
- It has universal applicability.

Demography possesses all the above mentioned characteristics of science which are described as below:

- Demography deals with the facts and the figures of population.
- Demography includes the data relating to population which is collected through Census. The data collected through Census is verifiable and accurate as it is directly collected from the targeted population.
- Demography has its own theories like the Malthusian Theory, Zero Population Growth Theory, Cornucopian Theory and Theory of Demographic Transition.
- These theories can be scientifically tested on the basis of observations and experiments.
- Demography predicts the changes in population on the basis of cause and effect relationships.
- The principles of demography are applicable to a large extent to all the countries, regions and states.

Thus, we can conclude that demography is a science and according to **Irene Taeuber**, "With the improved data, new techniques and precise measurement of the demographic transition that is occurring, demography has become a science. In fact, it has become an *applied science* and applied technology".

1.5 ORIGIN AND DEVELOPMENT OF DEMOGRAPHY

If we try to trace the origin of the discipline we can find that the concept and notion regarding the study of human population is as old as human civilization. During the time of Confucius many Chinese and Greek writers and after that Aristotle, Plato and Kautilya (around 300 B.C) have expressed their keen interest over the study of human population.But as a formal discipline it emerged around the middle of the seventeenth century

in England. Most of the early developments in the discipline took place in England, France, Germany and few other European countries. But gradually it spread to other areas of the world and United States of America latter contributed substantially towards the development of the discipline. John Graunt, an English haberdasher, who is generally acclaimed as the 'Father of Demography or Population Studies', first initiated the systematic research in case of population study. His pamphlet, *Natural and Political Observations made upon the bills of Mortality,* published in London in 1662, is a landmark attempt in establishing Demography as a formal discipline. The discipline of Demography will always remain grateful towards Graunt for his contribution towards the development and growth of the subject. After that, people like Sir William Petty, Edmund Halley, Johann Peter Susmilch, Thomas R. Malthus further built upon the works of Graunt and gradually were able to establish Demography as a widely accepted discipline in the academic periphery. With the passage of time, new issues and subject matters penetrated into the Demographic understanding. New ideas and new issues like Fertility, Mortality, Migration have made their mark on the study areas of the subject.The development of probability theory in statistics, the beginning of census operations and the establishment of the system of civil registration has given a new bloom to the academic discipline of Demography. Various underdeveloped and developing countries have shown their keen interest in population studies as it helps them to design and enhance various socio-economic policies. Measurement of the quality of population helps them create various administrative set up for the well being of the people. Thus a new era of planning on the basis of population for development dawned in these countries and terms like 'Economic Planning', 'planning for development', 'five year plans' etc came to be widely used. The quantitative element of demography has been joined by the qualitative element and this has enhanced the scope of the discipline into broader areas of studies. The inclusion of subjects like fertility studies, mortality studies, urban studies has helped in the diversification of research and more specialisation in the discipline helps it to be more inclusive in nature. The discipline is no longer confined to statistical analysis without reference to the social setting in which population phenomena

take place. The importance of estimating the future course of population growth as a basis for social and economic planning was also realised by planners and policy makers. Recently, various International bodies like the United Nations (U.N.) and others have shown their keen interest towards the issues related with population studies. Various U.N. bodies such as the World Health Organisation(WHO) ,The United Nations Economic, Social and Cultural Organisation (UNESCO), The Food and Agricultural Organisation(FAO) also continue to maintain their interest in the various issues and problems of population.



CHECK YOUR PROGRESS

Q 1: Name the two Greek words from which the term Demograpy has been derived.

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Q 2: Mention three key determinants of population change. (Answer in about 10 word)

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1.6 RELATION OF DEMOGRAPHY WITH OTHER SCIENCES

Demographical aspects of an individual are studied with the help of a social science i.e., “Demography”. There are different branches of social science which studies different aspects of an individual. Since the activities of an individual are inter-connected, various social sciences helps in a holistic understanding of the diverse facets of human beings as well as society. Each Social Science also has certain similarities with as well as distinctions from other social sciences. We can therefore say that the social science disciplines are not disconnected but are interrelated and interdependent. Similarly, demography too has relationship with other social sciences. Let us now study about the relation of demography with other social sciences.

- **Demography and Sociology:** Demography is the science of human population. It is concerned with various aspects like size, composition, density, birth and death rates, etc. On the other hand, sociology is the study of society, human relation, societal behaviour, etc. One can find a relation between sociology and demography to a great extent. The elements of population like family size, literacy level, type of employment, etc. affect the social behaviour of a person to a great extent. Therefore, it is necessary to consider the aspects of population while studying sociology. The qualitative aspects of population cover wide information concerning the problems in the society. Thus, we can say that both demography and sociology is interconnected.

  According to **Kingley Davis**, the areas of study which require a combined knowledge of demography and sociology are fertility, population changes, structure of labour force, social organisation, family with regard to demographic behaviour, and internal and external migration. **Broom** and **Selznick** regard demography as one of the nine elements of sociological analysis such as social organisation, socialisation, social stratification, primary groups, associations, collective behaviour, culture, ecology and population.

  Demography and sociology also have certain differences. Some of them are:

  - Family, marriage, migration are considered under both heads but sociology studies it as a social institution and identifies its impact on social life. On the other hand, demography studies these as a contribution to the framework of population and its size. Thus, we can conclude that sociology is about social relationships but demography is related to social relations and population.
  - Sociology mostly explains social relations qualitatively while demography is just the opposite i.e., it describes social relations quantitatively using various statistical methods.

- **Demography and Economics:** A society's wants and demands give rise to problems which forms the subject matter of economics.

On the other hand, the framework of population and other factors associated with it comes under the purview of demography. Thus, we can say that demography and economics are somehow related to each other.

Demography studies minutely about the regional distribution of population which has an impact on the economic activities. The information accumulated by the demographers is of great importance to the economists while framing various policies of the Government. On the hand, some important aspects of economics such as volume of production, its consumption are also important for the demographers while framing policies related to the size and pattern of population.

However, one can also find out certain differences between the two subjects, as under:

- Economics consider production as an economic activity of men whereas; demography considers production as a means to study the quality of the population.
- Economics consider birth rate in order to know its effect over price, production, consumption, demand, labour market, demand and supply, etc. while demography consider birth rate in order to know its impact on the composition of population.

- **Demography and Social Biology:** Social biology as a part of biology studies the biological actions of man. It is mainly concerned with the beginning of life forms, their reproduction, hereditary processes and their place of living. On the other hand, demography is all about studying the characteristics of population like birth rate, death rate, quality of living, etc. It also covers aspects like size, structure, formation, pattern, density, composition of population and their changes thereof. Demography and social biology are interlinked. Demography attempts to understand the reproducible aspect of population for which they seek the help from socio-biological theories and principles. In return demography highlights the differences in birth rate over the quality of population, which formed the basis of

reproduction science in social biology laid by Galton in England. One can also find certain differences between the two as summarised below:-

- Though marriage is a common concept in both the disciplines, difference lies in the fact that the demographers are more interested in the role played by age of marriage in population growth whereas the socio-biologists are concerned more about the effect of marriage and the role played by castes on reproduction and the traits of the new born.
- Social biology studies the process of reproduction of human beings, whereas demography is concerned with the ability to reproduce.
- Social biology is a natural science; hence its laws have universal applicability. On the other hand, demography is a normative science.

- **Demography and Geography:** Demography is the study of the human population in a particular place at a particular time, whereas, geography is the study of natural environment, the places and the species of earth surface, and their interrelationship with human beings. Geography also tries to understand how the human culture communicates with the natural environment and the impact of location and place on people.

  These two concepts are closely related to each other. Demography takes into account the geographical conditions for the distribution of population. According to Ackerman, "Recent geographers have taken the cultural features of the earth, analysed them generically and genetically in their space relations and established co-variant relations of cultural features with each other and with those of physical and biotic environment. These distributional features are common to both demography and geography."

- **Demography and Human Ecology:** Human ecology studies the relation and interrelations between nature in general sense and human nature in particular. Human beings exploit, change and

develop natural resources. Therefore, **Hutchinson** and **Dewey** defined human ecology as "nothing else but bio-demography".

Human ecology and demography has a close relation. Human ecology studies various problems associated with population like fertility and mortality and other demographic data. The demographic variables act as dependents or independent variables in research conducted by human ecologists. Similarly, various principles and concepts of human ecology are used by the demographers in formulating research hypothesis. Accordingly, **P.W.Frank** stated that "Ecology provides specific theoretical statements about human population".

The differences between demography and human ecology lie on the fact that the conclusions relating to birth, death and migration rates, in case of human ecology, are derived from the study of animals. Also, cultural and social institutions forming an important part of demography do not come under the purview of human ecology.

1.7 IMPORTANCE OF DEMOGRAPHY

With the tremendous rise in population of the developing countries, it has become important to study about population and its problems in an economy. Therefore, demography is an integral part in studying the different aspects of an economy. The importance of demography can be better understood as follows:

- **For the Economy:** Demography and its role in the economy are of immense importance. The study of population is important in understanding whether the economy of a particular region is growing in proportion to the population growth rate. If the population growth rate is increasing rapidly it becomes difficult for the economy to keep pace with the rising population. Rising population creates more demand as well as more problems which require more attention of the government while undertaking developmental schemes.

  Excessive rate of population growth adversely affect the economy in the form of reduced per capita income, decreasing standard of living, increasing unemployment, imbalanced social growth and

increasing environmental pollution etc. Demographic studies throw light on these problems, which requires the attention of the government and the policy makers so that adequate developmental policies can been formulated.

- **For the Society:** Demography plays a very important role in understanding the basic functioning of a society. Increasing population hampers the growth and development of society by creating shortage of basic facilities like water, sanitation, electricity, education, health, transport and communication and other infrastructural facilities. Migration and urbanization, which affects population growth, are two important aspects, which has a huge impact on society. These issues are pointed out by the population studies which are helpful for the government to take necessary steps required for mitigating social problems.
- **Economic Planning:** Population studies provide necessary inputs to policy makers and planners for the economic plan of the country. Result of population studies are reviewed while fixing the targets to be achieved in terms of agriculture and industrial products, provision of basic services like schools, hospitals, transport, electricity, water facility, etc. Formulation of policies for birth control, future fertility rate, availability of labour forces are based upon the population data.
- **For Administrators:** Population studies help the administrators in taking decisions relating to functioning of the government. The major problems which hampers the proper functioning of the government in most of the under developed countries are mainly caused by rapid population explosion. The issues, which need to be taken into consideration while formulating policies by the administrators, include child welfare, reducing communicable diseases, better housing and transport system, sewerage facilities, etc. Therefore demographic studies are of vital importance to them.
- **For Polity:** Demography also plays a significant role in the Polity of a particular Region/Nation. The Census figures help the Election Commission of a country to provide a basis for dividing the constituencies in the parliament . The change in the number of voters

in a particular region over a period of time identifies the number of migrants flowing in and out of that region. Census studies give data relating to number of male and female voters, their educational qualification, age group, occupation, annual income, composition of family, etc. which helps the political parties to frame their agenda during the time of elections. Some other decisions like appointment of election officers and staffs, establishment of election booths are also based on this information.



CHECK YOUR PROGRESS

Q 3: Mention any two negative consequences of Excessive Population growth on economy. (Answer in about 10 words)

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1.8 LET US SUM UP

- Demography, in simple words, is the statistical study of population. The word demography has been derived from two Greek words Demos and Graphy. Demos means 'People' and Graphy means 'Study' which gives us the meaning of demography as the 'Study of People'.
- It is a vast subject dealing right from the population size, its composition and distribution to changes occurring in these aspects during a given period of time.
- Demography helps in identifying the quantitative and qualitative characteristics of human population.
- The demography as a concept is related to whether it is a micro or a macro study. Micro demography represents the restricted view of population studies. Under the micro concept, demography is the study of quantitative relations of demographic phenomena. Macro demography covers both qualitative and quantitative aspects.
- The scope of demography is very vast as it involves not only

theoretical understandings but studies pertainting to qualitative and quantitative aspects of population also.

- Demography can be called a science. A science is a systematised body of knowledge ascertainable by observation and experimentation. It is a body of generalisation, principles, theories or laws which traces out a causal relation between cause and effect. Demography makes use of scientific methods and procedures while studying about population and hence it is also a science.
- Demography has relationship with other social sciences like Sociology, Economics etc.
- The Study of population also has immense importance. With the tremendous rise in population of the developing countries, it has become important to study about population and its impact in an economy.
- The Study of population is important in understanding whether the economy of a particular region is growing in proportion to the population growth rate.
- Demography plays a very important role in understanding the basic functioning of a society. Increasing population hampers the growth and development of society by creating shortage of basic facilities like water, sanitation, electricity, education, health, transport and communication and other infrastructural facilities. These issues are pointed out by the population studies which are helpful for the government to take necessary steps required for mitigating social problems.
- Population studies provide necessary inputs to policy makers and planners for the economic plan of the country. Formulation of policies for birth control, future fertility rate, availability of labour forces are based upon the population data.
- Population studies help the administrators in taking decisions relating to functioning of the government.
- Demography also plays a significant role in the Polity of a particular Region/Nation.



1.9 FURTHER READING

1) Bhende, Asha, A.and Kanitkar, Tara. (2006). *Principles of Population Studies*. Mumbai: Himalaya Publishing House.

2) Raj, Hans. (1990). *Fundamentals of Demography (Population studies with special reference to India)*. Delhi: Surjeet Publication.



1.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: The word demography has been derived from two Greek words Demos and Graphy. Demos means 'People' and Graphy means 'Study'.

Ans to Q No 2: Fertility, Mortality and Migration.

Ans to Q No 3: Low per capita income and low standard of living.



1.11 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: Is Demography a Science? If yes, why?

Q 2: Explain the relationship between Demography and Economics.

Q 3: Briefly explain about the origin and development of Demography.

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss the Scope of Demography.

Q 2: Explain the importance of Demography.

Q 3: Explain the relation of demography with other sciences.

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UNIT 2 : BASIC CONCEPTS

UNIT STRUCTURE

2.1 Learning Objectives

2.2 Introduction

2.3 Concept of Fertility

- 2.3.1 Factors Affecting Fertility
- 2.3.2 Fecundity

2.4 Concept of Mortality

- 2.4.1 Factors Affecting Mortality
- 2.4.2 Infant Mortality
- 2.4.3 Maternal Mortality

2.5 Let Us Sum Up

2.6 Further Reading

2.7 Answers to Check Your Progress

2.8 Model Questions

2.1 LEARNING OBJECTIVES

After going through this unit, you shall be able to-

- understand the concept of fertility
- explain the various factors affecting fertility
- discuss the concept of mortality.

2.2 INTRODUCTION

In the previous unit, we have understood the meaning of the term demography. We have also learnt that fertility, mortality and migration are the key determinants of change in size of population any particular region. In this unit, we shall learn about the first two key determinants – fertility and mortality. Here we shall try to understand the concepts of fertility and mortality, factors affecting fertility and mortality, types of mortality so on and so forth. Let us first discuss the concept of fertility in the next section.

2.3 CONCEPT OF FERTILITY

Fertility is one of the key determinant of population growth and change. We all know that the survival of human society depends upon continuous addition of new members through the process of reproduction. Without human beings, society shall cease to exist. Therefore, human fertility is very important for existence of society. Human fertility is responsible for biological replacement and for the maintenance of human society. Fertility in simple words mean the ability of a woman to give birth to a child. According to Lewis and Thompson '*Fertility is generally used to indicate the actual reproductive performance of a woman or groups of women*'.

2.3.1 Factors Affecting Fertility

In the past, there was no check or control in so far as child producing was concerned. But today, fertility is being checked since a family of two children is considered a normal family. There are people who do not at all like to have a child, though they have capacity to produce children. There are, however, many factors which affect and influence fertility. There are numerous factors which affect fertility. Let us discuss them:

- **Biological Factors:** The two most important biological factors affecting fertility are age and sex. The reproductive capacity of a women beings with mensuration and continues till her menopause. With menopause, comes an end of the chid bearing capacity of a woman. Therefore from the beginning of mensuration to menopause is the reproductive span of a women. The start of the first menstrual period among girls depends on a variety of factors such as the health status of the girls, food and nutrition, climatic conditions etc. Some girls may attain puberty i.e her first menstrual period at an early age like 10-11 while some girls may attain it later. Once a girl attain puberty, her fertile period begins but it stops once her menopause occurs. However, such limitations does not

exist in case of man.

- **Physiological Factors:** Physiological factors too affect fertility. Sometimes there are certain periods in a women's life in which she is sterile and unable to conceive. The natural fertility of every population is affected by the extent of primary and secondary sterility among women or couples. The primary sterility means the couples who have never had a child throughout their lives either by choice or due to their inability. The extent of primary sterility varies with the female age at marriage. Secondary sterility is inability of women to participate in reproduction after getting one or more children. Secondary sterility may be due to certain infection, disease or due to accident during childbirth. Fertility is also affected by foetal wastage, i.e., ***abortion*** and stillbirth.
- **Social Factors:** Several Social factors such as caste, religion, education, family system so on and so forth also largely influence fertility in a particular region. Since every region varies in terms of socio-cultural values, therefore fertility rate also varies from region to region. Let us briefly understand some of these social factors:
- **Religion:** Certain religious beliefs tend to have a great impact in fertility. For example for the Hindus birth of a son and daughter are very important since birth of a son is considered essential for the salvation of parents and birth of a daughter is necessary for Kanyadaan, which is considered a divine act. Marriage and reproduction are given very much importance in Hindu religious beliefs. This ultimately has a great influence upon fertility. Similarly, Polygamy is permitted by religion among the Muslims thereby increasing fertility.
- **Caste System:** Caste system too has its influence in fertility. Caste is an important social institution particularly in the rural areas of our country. It is usually seen that the birth rate is higher among the lower caste Hindus in comparison to the

higher caste. The lower caste people due to their poor socio-economic condition, marries off their daughter at a very early age. This increases her reproductive span thereby naturally increasing fertility. In certain cases and regions, upper caste too believes in the early marriage of their daughters, whichleads to an increase in the fertility rate. However, in the modern society with the expansion of education such caste-led or caste-influenced practices have been significantly declining especially in the rural areas.

- **Race:** Race too is seen as having influence in the fertility rate. Fertility rate varies among racial groups in some societies. For example, in many countries of Africa, where several races like whites, Asians co-habit with the locals, it is seen that fertility rate is higher among the locals than the other races.
- **Family System:** Fertility rate usually differs among types of family system. In nuclear families especially those residing in urban areas, there is a tendency to restrict childbirth to just one or two children. Such types of families, constituting only husband and wife poses difficulties in raising children, as there is hardly any other member to share the responsibility of child rearing. This is witnessed mostly in the developed countries and also in a few developing countries. On the other hand, couples in joint-families have greater number of children because child rearing becomes easy with the presence of many family members. Further in such families, one cannot deny that there is a pressure on the couples from the older members to give birth to more children thereby increasing fertility.
- **Education:** Education plays a determining role in the fertility. An educated woman, having good awareness about health and hygiene is seen to have lesser number of children than others who are less educated and having less knowledge

about health related matters. Apart from that, an educated girl prefers to have a job before starting a family. This delay the age of marriage thereby reducing her reproductive span. Further, because of the difficulty to balance personal and professional life, such women prefers to have only one or maximum two children. Therefore those countries having higher literacy rate, has lower level of fertility.

- **Economic Factors:** Occupation, level of income, urbanisation, etc. have tremendous influence in fertility. Developed countries having higher per capita income and higher standard of living have lower fertility rate.

2.3.2 Fecundity

Fecundity implies the capacity to conceive or bear children. Thompson and Lewis describes fecundity as a biological potencial and the physiological capacity to participate in reproduction and the absence of this potencial is known as infecundity or sterility. Barclay try to define fecundity as potencial level of performance of physical capacity for bearing children of the population. Fecundity is the main factor determining the fertility of a population. With fecundity other socio-economic factors play its role in determining the fertility of a population. Age at marriage, customs, environment, public health amenities, living standards, sexual activity, mortality condition of the spouse, biological potentiality and tendency of location affects the fecundity of women. It is important to note here that involuntary childlessness after marriage was not always due to infecundity of wife but the sterility of either the husband or the wife may be responsible for that.

2.4 CONCEPT OF MORTALITY

Mortality is another biological factor, which greatly affects population growth. In simple words, mortality implies end of life or death of a person. The United Nations and the World Health Organization have defined death

as '*the permanent disappearance of all evidence of life at any time after birth*'. From this definition, it is evident that any death prior to a live birth is not considered death. As such, abortions and still births are categorised as foetal deaths and not as deaths. Death therefore implies end of life of person after birth. Death rate greatly impacts population growth. For example in times of epidemic or any natural disaster such as TSunami, hundreds and thousands of people die which alters the demographic size of a particular region/country. The current Coronavirus is one such case where thousands of people have died especially in China.

Death rate varies from region to region and country to country. Some countries have very high mortality rate, while some others have comparatively lower mortality rates. The main reason behind this is availability of healthcare facilities. The regions with modern health care facilities and where health facilities are accessible to all have lower mortality rates. Further regions having better hygiene and sanitation facilities tend to have lower mortality rates. So the developed countries have lower death rates because people in such countries are economically well off and can avail proper and timely medical aid and treatment. Further such countries also have sophisticated and advanced heath care mechanisms which reduces the number of deaths. In case of underdeveloped nations and poorer regions, where there is lack of health care facilities, there is higher death rate. Apart from this, we can also observe differences in death rate among various communities residing in one particular region. We all know that society is not homogeneous. It comprises of people belonging to different classes and socio-economic stratas. So member of every class do not have equal health care accessibility. Those who are economically better off have access to better health care while those who survive from hand to mouth often die untreated as they cannot avail medical treatment due to lack of money. Thus, death rate is higher among the lower income groups of the society. Further, death rate is also seen to be higher among those who are engaged in hazardous occupations.

However in the contemporary period, with better medical facilities, greater access to health care so on and so forth, mortality rates have declined considerably across the world.

2.4.1 Factors Affecting Mortality

Like fertility, mortality too is affected by a number of factors. These factors may be in the form of biological, physiological, environmental so on and so forth. In the past, mortality rates were usually high during the times of famines, epidemics, wars etc. But in the present time, due to the rapid advancement in medical sciences, rising health consciousness, greater access to health care etc. mortality rates have reduced to a large extent. Let us discuss these causes behind the decline in mortality rates in details.

Causes of Decline in Mortality Rates in the Contemporary Period

- **Advancement in Medical Sciences:** Rapid advancement in Medical Sciences have led to a significant decline in the mortality rates around the globe. Medical Science have become successful in fining panacea for most of the dreadful diseases. Due to the development of sophisticated medical technology, those diseases which were earlier considered to be fatal has now become a trivial health issue. Therefore, due to the availability of better medical treatments, mortality rates have declined to a large extent.
- **Disease Control Medicines:** Most of the countries today have achieved great control over pandemics like typhoid, malaria, small pox, plague etc. The various healthcare programs of World Health Organization (WHO) have been quite successful in exterminating diseases like small pox, polio, plague, TB etc.
- **Healthcare Programs:** The various healthcare programs run under the world bodies like WHO have achieved great success in spreading awareness about the health hazards caused by pollution etc. Consequently different countries have framed healthcare policies, taken measures to control health hazards etc. as per WHO recommendations and guidelines. This has

also largely contributed to the declining mortality rates.

- **Improved Medical Facilities:** Improved Medical Facilities in particularly in the developed and developing countries have resulted in declining mortality rate to a great extent. These countries have invested a great deal of financial resources in increasing the number of doctors and nurses and in training them. Besides, government efforts in building hospitals with modern facilities in rural areas and mushrooming of private hospitals and nursing homes in urban areas have helped greatly in reducing mortality rate.
- **Spread of Education:** The mortality rates are declining in proportion to the increasing literacy rate. Expansion of education has signifantly helped in spreading health consciousness and awareness among people. People are now aware of the negative consequences of superstitions and other beliefs on human health. Education has made people realise the need of visiting doctors, availing medical treatments for resolving their health issues. People have also become aware of the importance of regular physical exercise, balanced diet, gym, yoga etc. for maintaining a good health. These trends have helped tremendously in lowering death rates in the contemporary period.
- **Status of Women:** Today the literacy rate among women is increasing in most of the developing countries, which has ultimately resulted in the rise of the status of women. Now, women are more concerned about hygiene, cleanliness, child-birth etc. They are also similarly concerned about the health of their children, thus, significantly contributing towards reduction in the infant mortality rate. Similarly, the death rate of women at the time of delivery is gradually decreasing due to the prevention of early marriages, increasing hospital-deliveries, availing modern medical treatments etc.
- **Life Expectancy:** In present scenario, factors like rapid

economic growth along with increase in per capita income, enhanced medical, health, sanitation, water facilities, etc. has helped in improving the life expectancy rate in most of the developing countries. It has also lead to decline in death rate subsequently resulting in increasing the percentage of people living beyond the age of sixty years.

In conclusion, it can be said that with the advancement of medical sciences, rising health consciousness among people and greater accessibility to health care facilities, mortality rates have immensely declined. On the other hand, decline in mortality rates contributes to increasing size of population and in countries like India where there is high fertility and low mortality, population growth is massive.

2.4.2 Infant Mortality

In demographic terminology, infants are the children below one year of age. The study of infant mortality gains importance, especially because mortality during the first year of life is invariably high for all countries, irrespective of whether the overall levels of mortality are high or low. Some of the important causes of infant mortality may be-

- Some babies die at the time of birth due to number of reasons like lack of medical facilities, complicacies during child birth, incompetency of the health-practitioner, so on and so forth.
- Some other causes may be lack of proper nutrition, exposure to cold or heat or harmful environment; lack of proper care from parents, hidden internal disorders etc.
- The mothers can be ignorant and may not realise the need of medical care after the birth of baby.
- Child-preference may be one of the causes. For example in families which prefer sons over daughters may not take necessary care if a girl child is born which may affect the growth of the child and may also lead to death of the child.

2.4.3 Maternal Mortality

Maternal mortality may be defined as the death of a woman while pregnant or within 42 days of termination of pregnancy. Maternal mortality is bound to be high in societies where-

- the women are illiterate;
- the people are of orthodox nature;
- the health of the women is not very much cared for;
- interval between the birth of two children is rather less;
- there are no medical facilities;
- pregnant women cannot be provided with nutritive food;
- the system of child marriage prevails.



CHECK YOUR PROGRESS

Q 1: State the meaning of fertility. (Answer in about 30 words)

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Q 2: Mention any two reasons behind infant mortality. (Answer in about 10 words)

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Q 3: What is meant by maternal mortality? (Answer in about 20 words)

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2.5 LET US SUM UP

- Fertility is one of the key determinant of population growth and change.
- Human fertility is responsible for biological replacement and for the maintenance of human society. Fertility in simple words mean the

ability of a woman to give birth to a child. According to Lewis and Thompson '*Fertility is generally used to indicate the actual reproductive performance of a woman or groups of women*'.

- Fertility is influenced not only by Biological factors but also by various Socio-Cultural factors.
- Mortality is another biological factor, which greatly affects population growth. In simple words, mortality implies end of life or death of a person.
- Death rate varies from region to region and country to country. Some countries have very high mortality rate, while some others have comparatively lower mortality rates.
- The regions with modern health care facilities and where health facilities are accessible to all, have lower mortality rates. Further regions having better hygiene and sanitation facilities tend to have lower mortality rates.
- Death rate also varies according to class. Members of every class do not have equal health care accessibility. Those who are economically better off have access to better health care while those who survive from hand to mouth often die untreated as they cannot avail medical treatment due to lack of money. Thus, death rate is higher among the lower income groups of the society.
- In the present time, due to the rapid advancement in medical sciences, rising health consciousness, greater access to health care etc. mortality rates have reduced to a large extent.
- Infant mortality and maternal mortality are important aspects of mortality. In demographic terminology, infants are the children below one year of age. Therefore, death of a child below one year of age is termed as infant mortality.
- Maternal mortality may be defined as the death of a woman while pregnant or within 42 days of termination of pregnancy.
- There are number of causes, which leads to infant and maternal mortality. Of them lack of proper medical treatment, lack of nutrition are most important.



2.6 FURTHER READING

1) Bhende, Asha, A. and Tara, Kanitkar. (2006). *Principles of Population Studies*. Mumbai: Himalaya Publishing Hopuse.

2) Raj, Hans. (1990). *Fundamentals of Demography (Population studies with special reference to India)*. Delhi: Surjeet Publications.

3) Sinha, V.C. and E. Zacharia. (2007). *Elements of Dempgraphy (With Demographic Profile of India and the World)*. New Delhi: Allied Publishers Pvt Ltd.



2.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Fertility in simple words mean the ability of a woman to give birth to a child. According to Lewis and Thompson 'Fertility is generally used to indicate the actual reproductive performance of a woman or groups of women'.

Ans to Q No 2: Lack of medical facilities and lack of proper nutrition.

Ans to Q No 3: Maternal mortality may be defined as the death of a woman while pregnant or within 42 days of termination of pregnancy.



2.8 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: Explain in brief the role of education in declining mortality rates.

Q 2: Briefly mention the causes of maternal mortality.

Q 3: What is mean by fecundity?

Long Question (Answer each question in about 300-500 words)

Q 1: Discuss the important factors which influence fertility.

Q 2: Discuss the causes behind declining mortality rates in the present era.

Q 3: 'Fertility and Mortality rates are not only influenced by biological factors but also socio-cultural factors'. Elucidate the statement with your own examples.

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UNIT 3 : MIGRATION

UNIT STRUCTURE

3.1 Learning Objectives

3.2 Introduction

3.3 Migration: Meaning and Definition

3.4 Types of Migration

3.5 Causes of Migration

3.6 Consequences of Migration

3.7 Let Us Sum Up

3.8 Further Reading

3.9 Answers to Check Your Progress

3.10 Model Questions

3.1 LEARNING OBJECTIVES

After going through this unit, you will able to-

- define migration
- describe the types of migration
- explain the causes of migration
- discuss the consequences of migration.

3.2 INTRODUCTION

In the previous unit, we have discussed about the basic concepts in demography. We have learned how fertility and mortality affects population growth. Along with fertility and mortality, migration too is a determining factor of change in population growth. Migration plays a significant role in changing the demographic scenario of any particular region. Therefore,it is an important aspect of study for a student of demography. In this unit, we shall discuss about migration, which is an important component of population change. Along with meaning and definition, we shall discuss about the different types of migration. Further we shall discuss about the causes of migration and after reading this unit

we shall also be able to understand the consequences of migration.

3.3 MIGRATION: MEANING AND DEFINITION

In simple terms, migration is defined as movement of people from one place to another. It is the movement of people between regions and countries. When a person moves away from his/her place of origin to another place and settles in the new place he/she is called a migrant. It basically refers to changing one's place of residence. The United Nations Multilingual Demographic Dictionary defined migration as 'Migration is a form of geographical mobility or spatial mobility between one geographical unit and another, generally involving a change in residence from the place of origin or place of departure to the place of destination or place of arrival. Such migration is called permanent migration and should be distinguished from other forms of movement which do not involve a permanent change of residence'. Thus migration implies mobility of a person from his place of birth to a new destination in which he either settles permanently, which is called permanent migration. In case of temporary migration, the migrants do come back to their place of origin at some point of time. From this, we can say that migration can be either permanent or temporary.

Another important aspect of migration is that it can be either individual or group. In some cases it may be an individual alone who decides to migrate from his place of origin to a new destination for a variety of reasons while in some other cases a large croup or an entire village may decide or be compelled to move to a new location. In such cases of group migration, population size and structure is enormously affected.

Further, unlike fertility and mortality, which are largely biological factors affecting population growth, migration is determined by socio-economic factors. Economic conditions, political instability, natural disasters, educational and health facilities so on and so forth are key determinants of migration.

Migration shows the trends of social changes. From the historical viewpoint during the process of industrialisation and economic

development, people migrate from farms to industries, from villages to cities, from one city to another and from one country to another. In modern times, technological changes are taking place in Asia, Africa and Latin America due to which these regions are witnessing large-scale migration from rural to urban areas.

Economists are interested in the study of migration because migration affects the supply of skilled and semi-skilled labourers, development of industries and commerce causing changes in the employment structure of the migrated people. Formulation of economic policies has a close relation with the process of migration because migration affects the economic and social development of a country.

Migration is an important determinant of population change. It determines population size, rate of population growth and the structure of population. Therefore, study of migration is inevitable for planners and policy makers.

3.4 TYPES OF MIGRATION

Migration can be of different types depending on varied factors. Let us now learn about the different types of migration

- **Immigration and Emigration:** When people move from one country to another then, for the country in which they have moved to, it will be a case of immigration. For example in case of people migrating from Bangladesh to India, it is a case of immigration for India. The people involved are known as immigrants in India. But the same will be a case of emigration for Bangladesh because they have left their own country i.e Bangladesh and come to India. In Bangladesh, they will be known as emigrants. Thus, people leaving their own country are known as emigrants in their own country and immigrants in the Country to which they have migrated. Similarly, for their place of origin, which they have left, it will be emigration and for the country to which they have migrated, it will be immigration.
- **In-Migration and Out-Migration:** These are types of internal migration and are confined within the borders of a particular country

only. Unlike immigration and emigration that involves more than one country and implies migrating from one country to another, In-migration and out-migration on the other hand implies migrating from one region of a particular country to another region of that same country. In-Migration refers to the phenomenon of individuals/ group of people coming into or migrating into a particular region while out-migration refers to individuals or groups of people moving out or migrating out of a particular region. For example, migration from Assam to West Bengal will be a case of out-migration for Assam and in-migration for West Bengal. In the case of this example, the migrant moves out of Assam and therefore it is out-migration for Assam and since the person moves to West Bengal, it will be in-migration for West Bengal.

- **Internal Migration and External Migration:** Migration of people from one region to another of a particular country is known as internal migration. For example when people move from one state to another or one region to another in India, it is called internal migration. This type of migration is confined to the borders of a particular country only. On the contrary, when people migrate from one country to another for permanent settlement, it is known as external migration.
- **Gross and Net Migration:** Gross migration is the total number of persons coming into the country and also going out of the country for settlement elsewhere during a particular time period. While, the difference between the total number of persons coming to reside in a country and going out of the country for residing elsewhere during a given time period is called as net migration.



CHECK YOUR PROGRESS

Q 1: State the meaning of migration. (Answer in about 50 words)

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Q 2: Distinguish between in-migration and out-migration. (Answer in about 60 words)

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3.5 CAUSES OF MIGRATION

There are innumerable factors, which lead people to migrate from one place to another. We shall classify them into push and pull factors. Before discussing the factors let us first understand what does push and pull factor mean**.**

- **Push Factors:** The push factors are those factors which compels people to leave their place of origin and migrate to a new place.
- **Pull Factors:** The pull factors on the other hand are those factors that attract people towards a particular region/place.

Let us first discuss about the push factors-

- **Economic Condition:** We all know that occupation and income are two very important determinants of a person's condition of life. Therefore, economic condition is a key determinant in migration. People generally migrate when they face lack of economic opportunities in their own place. Lack of opportunities for higher income, scarcity of land, unfavourable condition of land, lack of employment opportunities etc compels people to migrate to other regions in search of alternative and better livelihood opportunities.
- **Climatic Condition:** Climatic factors too play a significant role in migration. Regions affected by natural calamities and disasters often compel people to leave that place and migrate to a safer region.Regions which face rampant earthquakes or flood prone

regions often witness people moving out to other regions.

- **Political Instabilities:** Every individual chooses and prefers to live in a peaceful environment. Any kind of threat to their life-security becomes a provoking factor of migration. People migrate from regions which face political conflicts, wars, and other such hostile situations that adversely affect life of the people residing there. Thus Political instability, hostile environment leads to lack of security of the life and property of people and thereby pushes people out of such regions to settle in other peaceful regions.
- **Religious Factors:** Religious factors too act as crucial determinants in migration. Sometimes some regions face religious antagonisms and conflicts, which may act as threat to persons of particular religious group. In such cases of threat people migrate from that region.
- **Socio-Cultural Factors:** Similar to the above point, socio-cultural hostility, lack of favourable social conditions for human settlement acts as push factor in migration. They provoke people to move out and settle elsewhere.
- **Lack of Health and Educational Facilities:** Some regions suffer from the lack of health and educational facilities. People from such regions migrate to other regions where they can avail better medical and health facilities and better educational facilities.

From the above points, we can say that socio-economic backwardness, environmental hazards, wars and conflicts, lack of security of life, lack of infrastructural facilities are some of the important push factors in migration. Any region, which suffers from one or more of these problems, becomes unfavourable for human development, and,is therefore abandoned by people residing there. Hence due to these push factors, they migrate from such regions to other regions in search of better living conditions.

Let us now discuss about the pull factors in migration

- **Abundant Employment Opportunities:** It is often seen that people, especially from regions with high poverty, migrate to those regions where there are numerous employment opportunities and other

avenues for livelihood. Employment opportunity therefore is a strong pull factor in migration. Large scale migration takes place to regions, which are industrial hubs as they provide plentiful employment avenues.

- **Favourable Climatic Conditions:** Another pull factor is the favourable climatic condition. As we have mentioned above, people migrate from places, which are prone to natural disasters. And in such cases, the nearby regions which have favourable climatic conditions and are conducive for human survival becomes the destination for the migrants.
- **Better Health, Educational and Communication Facilities:** Better infrastructural facilities is another strong pull factor, which attracts huge number of migrants. Regions with good infrastructural facilities in terms of health, education, transport and communication so on and so forth become the favoured destination for migrants.
- **Favourable and Peaceful living conditions:** Along with the above three, security to life and property also becomes an important factor in migration. Even if a region is economically strong and has good infrastructural facilities, yet if it is politically unstable, conflict-ridden, etc., hardly people would migrate to such a region. So harmonious living condition becomes a determinant in migration and acts as a pull factor.



CHECK YOUR PROGRESS

Q 3: What is meant by push factor in migration? (Answer in about 50 words)

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Q 4: Give two examples of pull factor of migration. (Answer in about 10 words)

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3.6 CONSEQUENCES OF MIGRATION

Migration, as we have mentioned above, is an important factor of demographic change. Along with fertility and mortality, migration significantly affects the size of population. Further it also has a great impact on the socio-economic condition of any particular region or country. Therefore, though migration is a demographic event, it has long-term consequences on the socio-economic and cultural development of any region or country.

Migration also has several social consequences. It is a key reason behind the changing family system. In Rural areas, due to migration of many family members to urban centres, joint family system is gradually declining. Women now has a greater role to play not only in the family matters but also in managing the economic affairs of the family as the men folk migrates to work in the urban centres. Further, there has also been significant decline in the rigid practices of the caste system. Migration to urban areas and exposure to modern ways of life changes the beliefs and attitudes of the migrants. They bring the new values and attitudes when they come to the village, which gradually leads to the change in old customs and practices in the rural areas.

As we have already mentioned above, the consequences of migration are felt not only in the places of origin, it is felt in the place of destination as well. Let us understand the consequences of migration in the place of destination in the following-

Migration as we know is usually from rural to urban areas. When huge migration takes place to urban areas, it poses several adverse effects. The first major problem that is seen in the growth of slums. Due to lack of adequate housing facilities and acute housing shortage, huge slums areas grow in urban areas and these areas suffer from the lack of access to municipal facilities such as clean drinking water, clean toilets, electricity, sewage disposal system etc. The city transport system is unable to meet the demand of the growing population. Further large population also results in greater air and noise pollutions, traffic congestion etc. Apart from that, criminal activities also rise in such areas.The migrants

therefore suffer from lack of hygiene and sanitation and their living environments are not conducive to good health.



3.7 LET US SUM UP

- Migration plays a significant role in changing the demographic scenario of any particular region.
- In simple terms, migration is defined as movement of people from one place to another.
- When a person moves away from his/her place of origin to another place and settles in the new place he/she is called a migrant.
- The United Nations Multilingual Demographic Dictionary defined migration as 'Migration is a form of geographical mobility or spatial mobility between one geographical unit and another, generally involving a change in residence from the place of origin or place of departure to the place of destination or place of arrival.
- Migration can be either permanent or temporary. Migration is that it can be either individual or group.
- Unlike fertility and mortality, which are largely biological factors affecting population growth, migration is determined by socio-economic factors.
- Migration shows the trends of social changes.
- Migration can be of different types depending on varied factors.
- When people move from one country to another then, for the country in which they have moved to, it will be a case of immigration.
- People leaving their own country are known as emigrants .
- In-migration and out-migration implies migrating from on region of a particular country to another region of that same country.
- Migration of people from one region to another of a particular country is known as internal migration.
- On the contrary, when people migrate from one country to another for permanent settlement, it is known as external migration.
- Gross migration is the total number of persons coming into the

country and also going out of the country for settlement elsewhere during a particular time period. While, the difference between the total number of persons coming to reside in a country and going out of the country for residing elsewhere during a given time period is called as net migration.

- There are innumerable factors, which lead people to migrate from one place to another. They are classified into push and pull factors.
- The push factors are those factors, which compels people to leave their place of origin and migrate to a new place.
- The pull factors on the other hand are those factors that attract people towards a particular region/place.
- Migration is a demographic event but it has long-term consequences on the socio-economic and cultural development of any region or country.



3.8 FURTHER READING

1) Bhende, Asha, A.and Tara, Kanitkar. (2006). *Principles of Population Studies*. Mumbai: Himalaya Publishing House.

2) Raj, Hans. (1990). *Fundamentals of Demography (Population studies with special reference to India)*. Delhi: Surjeet Publications.

3) Sharma, A.K. (2012) *Population and Society*. New Delhi: Contept Publishing Company Pvt. Ltd.

4) Bhatt B.K., Desai J.N. and Jhingan M.L. (2003). *Demography*. New Delhi: Vrinda Publications.



3.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: In simple terms, migration is defined as movement of people from one place to another. The United Nations Multilingual Demographic Dictionary defined migration as 'Migration is a form of geographical mobility or spatial mobility between one

geographical unit and another, generally involving a change in residence from the place of origin or place of departure to the place of destination or place of arrival.

Ans to Q No 2: In-migration and out-migration implies migrating from one region of a particular country to another region of that same country. In-migration refers to the phenomenon of individuals/group of people coming into or migrating into a particular region while out-migration refers to individuals or groups of people moving out or migrating out of a particular region.

Ans to Q No 3: The push factors are those factors which compels people to leave their place of origin and migrate to a new place. Lack of employment facilities; lack of infrastructural facilities are some of the push factors which often comples people to leave a particular place in search of a palce with better living conditions.

Ans to Q No 4: Abundant employment opportunities and favourable and peaceful living conditions are two pull factors of migration.



3.10 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: Why does migration mostly take place from rural to urban areas?

Q 2: What are the problems faced by migrants in the place of destination?

Q 3: How does out-migration affect rural economy.

Long Questions (Answer each question in about 300-500 words)

Q 1: Explain the different types of migration.

Q 2: Discuss the various causes of migration.

Q 3: Critically discuss the consequences of migration.

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UNIT 4 : SOURCES OF DATA

UNIT STRUCTURE

4.1 Learning Objectives

4.2 Introduction

4.3 Sources of Population Data

- 4.3.1 Population Census
- 4.3.2 Registration Method
- 4.3.3 Sampling Method
- 4.3.4 National Register of Citizens (NRC)
- 4.3.5 Aadhaar
- 4.3.6 International Sources

4.4 Let Us Sum Up

4.5 Further Reading

4.6 Answers to Check Your Progress

4.7 Model Questions

4.1 LEARNING OBJECTIVES

After going through this unit, you will able to-

- know the features of census and the methods used to collect census data
- understand the registration method of recording data on population
- describe sampling method of collecting data on population
- explain the recent initiatives like NRC and Aadhaar as sources of population data.

4.2 INTRODUCTION

In the previous units, we have learned about the key determinants of population growth i.e. fertility, mortality and migration. The growth of population varies from region to region depending on these determinants. Regions having high fertility and low mortality has high population in contrary to those regions having low fertility and high mortality. Similarly,

the regions, which are destination for migrants often faces high population growth. Now the question is how is population data recorded or what are the sources from which we can get data on population. Population data is recorded through different ways like census, registration method etc.In this unit, we shall discuss in details about the various ways in which population data is recorded.

4.3 SOURCES OF POPULATION DATA

Population data refers to data and information on various aspects of a population of a particular region/country. Keeping record of population data is very essential as it gives a timely picture of the demographic scenario of a particular region of a country. It is only through these records that we know whether the population of a particular region is increasing, decreasing so on and so forth. Further, on the basis of these records, the government and the policy makers frame and implement different policies for human development. These records also help researchers to conduct research on different aspects of population change. Given its multiple usages, record of human population is a vital and significant exercise. In this unit, we shall discuss in details how population data is enumerated and recorded. Though there are three main sources of population data i.e Census, Registration and Sample Surveys, yet the recent initiatives like NRC and Aadhaar has also become important sources of information on population. Therefore, after reading this unit, you will learn not only about census, registration method, sampling method, but also on recent initiatives like NRC, Aadhaar so on and so forth. Let us first begin with a discussion on one of the most effective and prominent method of recording popultaion data i.e census method..

4.3.1 Population Census

The word 'census' is derived from the Latin word 'censere', which means to value or tax. A census of population may be defined '*as the total process of collecting, compiling and publishing demographic, economic and social data pertaining, at a specified time, to all persons in a country or in a well-delimited part of a*

country'. In other words, it can be said that census is the collection of information about birth, death, occupation, social and economic conditions of the people of the country at a given time.

According to the United Nations, the census of population is defined as '*the total process of collecting, compiling and publishing demographic, economic and social data pertaining, at a specified time or times to all persons in a country or delimited territory*'.

Population census is the primary source of basic national population data required for administrative purposes and for many aspects of economic and social planning and research. In most countries across the globe, population censuses are conducted at regular intervals. Many countries such as the United States and India conduct a population census every ten years (a decinneal census), however, the United Kingdom, Japan and Canada conducts at an interval of five yeras (a quinquennial census).

- **Significant Features of Census:** According to Hans Raj, Census has certain very important and significant features -
  - Census is a national stock-taking process, in which a nation gets information about migration of people, their age, sex, occupation, etc. and about people living in a country at a given point of time. A nation also gets information about the social and economic conditions of its citizens.
  - Census is almost always organised and conducted by the government, because it is such a gigantic task that it is impossible to get the whole work completed by any private agency, more so when the country is wide and vast and also thickly populated.
  - Census is almost carried out once in a decade in every country by way of which considerably dependable figures can be obtained.
  - Every country makes an atttempt that census operations should be completed within limited and

specified time and that too without involvement of huge manpower and economic resources, but not at the cost of efficiency or work.

- During census operations, every effort is made to collect first hand information about every person. While collecting information, either an individual or a family is considered as a unit.
- Before census data collection, all concepts should be made very clear because in the absence of clarity many mistakes are likely to occur.
- Census date is published, after the data collected has been authentically verified.
- Before the actual census operations are carried out, some preliminary steps are taken. These include identification of area, collection of information of houses, etc. in that area, the form in which information is to be collected, the process of collection and analysis of data.
- During census operation information is collected by personnel contacts.

➢ **Census Techniques or Methods:** Census data can be collected by two important census techniques, namely, De Facto Method and De Jure Method.

- **De Facto method:** Under this method, data is collected for the entire counrty on a particular day. Since, the people return home at night, such a census operation is conducted at night. Such a time of data collection at night is called the 'census night'. All the field workers are well-prepared for this specific night for data collection and are given proper training. On this night, anyone found anywhere are also counted. When the people actually present are counted at the same time in a census it is called a 'de facto population'. Since, the census is completed on a particular date, this

method is also called 'Date System' or 'One Night Enumeration System'. This method was followed in England as well as in India till 1931.

- **De Jure Method:** Under this method, every person in an area is counted and information are collected from every household. An effort is made that a temporary resident is not included in it, the people are enumerated at their permanent place of residence. For this method, a particular period is fixed within which census data is collected throughout the country. Usually census work is completed within a period of two or three weeks. This period is, therefore, called the 'Period Enumeration'. In this method, chances for inaccuracy are reduced to minimum, since the period given for completion of work is quite sufficient.

4.3.2 Registration Method

It is an important method of collecting population data. The method started during 19th century under which every birth, death and marriage is required to be registered. The registration method covers registration of such events as birth, death, marriage, divorce, separation, etc. It is compulsory for all the members of the family to have such significant events registered. There is no specific time for registration, the entire work continues throughout the year.

Sometimes, demographers use secondary data for their work and registration is one such source. Secondary data can be obtained from different sources, namely, vital registration, population registration, governmnet records, etc.

- **Vital Registration:** The registration of vital events is another important source of population information. A person's entry into the world, i.e., by birth and a person's departure from it, or in other words, by death, are considered to be vital events. The method of census gives information about the population

of that time. Whereas under registration method, every important event about population is registered. Today, in all countries of the world, it is almost compulsory that each and every vital events to be registered.

- **Population Registration:** In many European countries, it is necessary to maintain permanent population register for certain administrative and legal purposes. It is annually prepared, in which the name of each person in the country is entered. Migration of individuals are also registered. This type of registration is maintained in Sweden, Finland, Belgium, Israel and Korea.

4.3.3 Sampling Method

Sampling method is one of the important methods for the collection of population data. In this method, information is collected only from a sample of the population, which is representative of the whole population. There are different methods for the purpose of choosing a sample, such as, random sampling, stratified random sampling, etc.

Sample which is chosen at random without any plan or order is known as random sampling. Random sampling may be simple random sampling and stratified random sampling. In simple random sampling, each member of a population has an equal chance of being included in the sample. It is one of the easiest methods of sampling and is commonly used by the demographers. In stratified sampling method, a population is divided into a number of strata, and from each stratum, a particular number is chosen as sample.

Census is a time consuming and costly affair. Sometimes in some areas, it is not possible to count the population at the time of census because of some difficulties. In order to remove these problems and difficulties, sample surveys are conducted. In sample surveys, with the help of specially prepared questionnaires and trained interviewers, some special aspects of the population can

be studied in depth. However, sample surveys can never take the place either of a census or vital registration. Sample surveys are increasingly useful to planners and administrators.

- **Sampling Method used in India:** The use of sampling method is a very recent development in India. In 1949, a Register General of India was apointed and made responsible for collection of information on births and deaths. A system of collecting data between each census period was started and the National Sample Survey came into use. The aim of the National Sample Survey (NSS) organisation is to collect comprehensive information about socio-economic aspects for the entire country. The first round of the National Sample Survey was conducted in 1950; since then, information on different items, such as, birth, death, family planning, employment, housing conditions, etc., has been collected through various rounds of the NSS.

4.3.4 National Register of Citizens (NRC)

We all are aware that NRC has been a topic of debate and contestations especially in the last few years. NRC stands for National Register of Citizens. It is another important source of demographic data in our country. It is a register of all the legal citizens of India and it acts as an official record of all Indian citizens. It contains the demographic information about all the citizens of India as defined under the provisions of the Citizenship Act, 1955. It was first prepared after the 1951 census of India. The NRC has been made mandatory for the whole nation through the amendment of the Citizenship Act, 1955, in the year 2003. The purpose for which NRC has been created is to document all the legal citizens of India so that the illegal migrants can be identified and deported back to their own country. Citizenship Act, 1955 and The Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003 provides rules for NRC up gradation. As per the rules, one's

eligibility for inclusion in updated NRC shall be determined based on the NRC, 1951.

Since the time of its inception, NRC, has got upgraded from time to time in some states in subsequent times in India. It is because of such continuity of the process of registration that it sought to include all sorts of information about each and every person of a territory concerned, and most importantly about one's citizenship rights. Since it emphasizes on both: a) strategic point to start the process and b) made rules for its up gradation, the register continues to serve as an important source of demographic data in India.

The implementation process of NRC has been initiated in the year 2013-2014 from the state of Assam. For the process of updating NRC in Assam under the surveillance of apex court, hundreds of NRC Seva Kendras (NSKs) were set up where more than 50,000 state Government officials were working over a long period of time to verify the documents and record the information. To register with the NRC, an applicant has to provide certificates mentioned under two heads, viz. List A and List B. List A consists of 14 documents while List B consists of 8 documents. Those whose names are not in the NRC list will have to approach the Foreigners Tribunal for further enquiry.

4.3.5 Aadhaar

Aadhaar, is a 12-digit unique identity number that can be obtained by the residents of India. Aadhaar is based on biometric and demographic data of the residents, which is collected by the Unique Identification Authority of India (UIDAI), a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 ("Aadhaar Act, 2016"). It was established on 12 July, 2016 by the Government of India, under the Ministry of Electronics and Information Technology (MeitY). The UIDAI is the only authority for the issuance of 12-digit unique identification (UID) number to all

the residents of India. The UID had to be

- robust enough to eliminate duplicate and fake identities
- verifiable and authenticable in an easy and cost-effective way.

Under the Aadhaar Act 2016, UIDAI is responsible for Aadhaar enrolment and authentication, including operation and management of all stages of Aadhaar life cycle, developing the policy, procedure and system of issuing Aadhaar numbers to individuals and perform authentication and the security of identity information and authentication records of individuals. The Vision of UIDAI is to empower residents of India with a unique identity and a digital platform to authenticate any time, any where.

Mission of UIDAI

- To provide for good governance, efficient, transparent and targeted delivery of subsidies, benefits and services, the expenditure for which is incurred from the Consolidated Fund of India, to residents of India through assigning of unique identity numbers.
- To develop policy, procedure and system for issuing Aadhaar number to residents of India, who request for same by submitting their demographic information and biometric information by undergoing the process of enrolment.
- To develop policy, procedure and systems for Aadhaar holders for updating and authenticating their digital identity.
- Ensure availability, scalability and resilience of the technology infrastructure.
- Build a long term sustainable organization to carry forward the vision and values of the UIDAI.
- To ensure security and confidentiality of identity information and authentication records of individuals.
- To ensure compliance of Aadhaar Act by all individual and agencies in letter and spirit.
- To make regulations & rules consistent with the Aadhaar Act, for carrying out the provisions of the Aadhaar Act.

World Bank Chief Economist Paul Romer described Aadhaar as, “the most sophisticated ID programme in the world”. However, it is not a proof of citizenship but a proof of residence, so it does not grant the rights to domicile in India.

Aadhaar is any 12 digit random number, which doesn’t start from 0 or 1. This number isused as a valid ID while availing various government services such as a new LPG connection, pension schemes, digital locker, MGNREGA, NEFT etc.

The first UID number was issued to a resident of Nandurbar, Maharashtra. The Authority has so far issued more than 124 crore Aadhaar numbers to the residents of India.

4.3.6 International Sources

Population enumerations are also done by several international organisations such as the United Nations, World Bank so on and so forth. They maintain records of population data across the globe and publish population data for the world as a whole and for different countries separately at regular interval. The most important of them is the Demographic Year Book, published by the UN.

The records maintained by different world organisations provides varied aspects of demographic data such as population size, area, density, urban population, population growth, age-sex composition, number of births and birth rate, number of deaths and death rate etc. Besides, the UN also publishes quarterly report on the Population and Vital Statistics Report. These reports comprise of updated information on total population, total mid-year population and estimate of population for a recent reference year. Further Fertility rate, Mortality rates, infant deaths and other such vital events are also included as a part of Vital Statistics.

The Human Development Report of the United Nations Development Programme (UNDP) also publishes data on different social, economic and demographic aspects of different countries

and the world as a whole. Other international publications comprising data on world population includes ILO's Year Book of Labor Statistics, FAO's Production Year Book, Statistical Year Book of UNESCO so on and so forth.

The UNESCO also has various publications pertaining to data on education, literacy etc. among different countries in the world. Similarly, one can find data relating to varied aspects on health in the publications of WHO. Important data on Public health and Mortality for different countries of the world are found in WHO publications. Apart from the above sources, the World Bank also publishes data on various demographic, social and economic aspects in its annual World Development Report.



CHECK YOUR PROGRESS

Q 1: Name the two methods for the purpose of choosing a sample. (Answer in about 20 words)

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Q 2: What is 'Period Enumeration'? (Answer in about 40 words)

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4.4 LET US SUM UP

- The data required for the study o2f population are obtained mainly through three sources, namely, population censuses, registration of vital events and sample surveys.
- A census of population may be defined as the total process of collecting, compiling and publishing demographic, economic and social data pertaining to a specified time, to all persons in a country or to a well-delimited part of a country.

- Census data can be collected by two important census techniques, namely, De Facto method and De Jure method. In De Facto method, data are collected for the entire counrty on a particular day. On the other hand, in De Jure Method, every person in an area is counted and information are collected from every household in a particular period.
- The registration method covers registration of such events as birth, death, marriage, divorce, separation, etc. In sampling method, information is collected only from a sample of the population, which is representative of the whole population.
- It is another important source of demographic data in our country. It is a register of all the legal citizens of India and it acts as an official record of all Indian citizens. It contains the demographic information about all the citizens of India as defined under the provisions of the Citizenship Act, 1955.
- NRC was first prepared after the 1951 census of India. The NRC has been made mandatory for the whole nation through the amendment of the Citizenship Act, 1955, in the year 2003.
- The purpose for which NRC has been created is to document all the legal citizens of India so that the illegal migrants can be identified and deported back to their own country.
- Aadhaar, is a 12-digit unique identity number that can be obtained by the residents of India. Aadhaar is based on biometric and demographic data of the residents, which is collected by the Unique Identification Authority of India (UIDAI), a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 (“Aadhaar Act, 2016”).
- Population enumerations are also done by several international organisations such as the United Nations, World Bank so on and so forth.
- They maintain records of population data across the globe and publish population data for the world as a whole and for different countries separately at regular interval.



4.5 FURTHER READING

1) Bhende, Asha, A.and Tara, Kanitkar. (2006). *Principles of Population Studies*. Mumbai: Himalaya Publishing House.

2) Raj, Hans. (1990). *Fundamentals of Demography (Population studies with special reference to India)*. Delhi: Surjeet Publications.



4.6 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Simple random sampling and Stratified random sampling are the two methods for the purpose of choosing a sample.

Ans to Q No 2: In De Jure method of data collection, a particular period is fixed within which census data is collected throughout the country. Ususally census work is completed within a period of two or three weeks. This period is therefore, called the 'Period Enumeration'.



4.7 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: What is meant by census?

Q 2: Define registration method.

Q 3: Write briefly the methods of collecting census.

Long Question (Answer each question in about 300-500 words)

Q 1: Describe the salient features of census.

Q 2: Define NSS. Analyse the sample method used in India.

Q 3: Write a brief note on Aadhaar highlighting its missions.

Q 4: Write about the various international sources of population data.

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UNIT 5 : POPULATION THEORIES-I

UNIT STRUCTURE

5.1 Learning Objectives

5.2 Introduction

5.3 Antiquity

5.3.1 Mercantilist, Physiocratic and Related Views

5.4 Malthusian Theory

5.4.1 Criticism of Malthusian Theory

5.5 Demographic Transition

5.5.1 Stages of Demographic Transition

5.5.2 Demographic Characteristics of Today's Developing Countries

5.6 Let Us Sum Up

5.7 Further Reading

5.8 Answers to Check Your Progress

5.9 Model Questions

5.1 LEARNING OBJECTIVES

After going through this unit, you will able to-

- understand the concepts of antiquity theories
- explain Malthusian theory and its criticism
- discuss demographic transition and its limitation.

5.2 INTRODUCTION

The population during ancient times experienced a high mortality due to lack of progress in science and technology. Therefore, the concern about population in ancient societies was restricted to replacement of population lost through the unusually high mortality. During the Greek period there were some definite views on population. For example, Plato, the great Greek philosopher, emphasized that for human perfection stability of population is indispensable. In other words, he emphasized the

importance of quality of population rather than mere quantity. Kautilya, ancient Indian administrator and economist, was of the view that the situation of too few people is a greater evil than too many. At the height of the Roman Empire, being pro-natalist was more common. Cicero was of the view that rapid population growth is necessary to replace war casualties; this was an era of colonization which would be easier with more people.

However, with the decline of the Roman Empire an anti-natalist policy started gaining ground. It was a period of economic stagnation and "fatalist period" of European history. Celibacy was considered to be the highest form of human existence. By the thirteenth century, slight changes in the anti-natalist policy were visible. For example, Thomas Aquinas argued that marriage and family building were not inferior to celibacy. With the growth of mercantilism, where nations were built on increasing trade and wealth, population assumed new importance. Thus, there were different views and policies as a response to changing population situations. Such efforts have gradually led to theorizing about the population changes keeping in view the consequences of population change. There have been divergent views on population situations which have contributed to formulation of important theories of population. Important of them are antiquity theory, Malthusian theory and theory of demographic transition. Population size and change play such a fundamental role in human societies that they have been the subject of theorizing for millennia. Most religious traditions have had something to say on these matters, as did many of the leading figures of the ancient world.

In modern times the subject of demographic change has played a central role in the development of the politico-economic theory of mercantilism; the classical economics of Adam Smith, David Ricardo, and others; the cornucopian images of utopians such as the Marquis de Condorcet; the contrasting views of Malthus as to the natural limits imposed on human population; the socio-political theories of Marx, Engels, and their followers; the scientific revolutions engendered by Darwin and his followers; and so on through the pantheon of human thought. Most of

these theoretical viewpoints have incorporated demographic components as elements of far grander schemes. Only in a few cases have demographic concepts played a central role, as in the case of the theory of the demographic transition that evolved during the 1930s as a counter to biological explanations of fertility declines that were then current. In this section we will discuss two important theories /models that explain the linkages between population and development. These theories /models are Malthusian theory and demographic transition model. Malthusian theory is an example of population affecting development whereas the demographic transition model is an example of how development affects population.

5.3 ANTIQUITY

In the Greek scheme of political life, the individual was only a part of the state and had to play a subordinate role to it. In ancient Sparta, all Spartans were compelled to get married and celibacy was punishable by law and denounced in public. Procreation within marriage was emphasized, as the continual wars demanded a constant supply of able-bodied men. Deformed babies were invariably eliminated. Plato and Aristotle considered the problem of population size not so much in economic terms, but more from the point of view of defence, security and government. Plato in his laws held that if the so-called “highest good” was to be achieved the city-state should have 5,040 citizens. In the event of either excess or shortage of population, he proposed measures to maintain the desired size. In the case of under-population, he recommended rewards, advice or rebuke to the young in order to increase the birth rate and immigration. To remedy overpopulation he proposed birth control for large families, and if necessary, colonization. Aristotle in his “Politica” held that land and property could not be increased as rapidly as the population would grow and concluded that an excessive number of inhabitants would increase poverty and social ills.

The Romans viewed population questions in the perspective of a great empire rather than a small city-state. Roman writers encouraged procreation by granting certain privileges to married couples with children

on the one hand, and by taxing and disinheriting those who did not get married or have children. Early and mediaeval Christian writers considered questions of population almost entirely from a moral and ethical standpoint. On the one hand, they condemned polygamy, divorce, abortion, infanticide and child exposure, and on the other, they glorified virginity and continence and frowned upon second marriage. Some early Christian writers attributed the growth of world's population to want and poverty and cited pestilence, famine, war, etc., as nature's means of reducing excess population. While others favoured high birth rates due to constant threat of depopulation through famines, epidemics and wars.

The views of Muslim authors on population resemble those of Hebrew and Christian authors. The worth noting among Muslim writers was Ibn Khaldoun (1332- 1460), an Arab author of the fourteenth century. In the first place, he held that a densely settled population was conducive to higher levels of living since it permitted a greater division of labour, a more effective use of resources, and military and political security. Secondly, he maintained that favourable economic conditions and political order stimulated population growth by increasing natality and checking mortality. He also sounded a note of warning stating that economic progress also encouraged luxurious living, led to higher taxation and brought about political instability, which in turn caused economic depression and depopulation.

The period between the beginning of the sixteenth century and the end of the eighteenth century is known for rapid changes that took place in several aspects of human life. It was the beginning of the modern age. During this period new routes to India were explored, America was discovered, gun-powder and printing were invented and a new impetus was provided to arts and sciences as well as to trade and manufacturing. Old feudal system collapsed making way to capitalism.

5.3.1 Mercantilist, Physiocratic and Related Views

Mercantilist doctrine oriented towards economic policy did not develop a population theory in a strict sense, although views on

population occupied a prominent place in the mercantilist system. Mercantilist ideas dominated economic thinking in most of Europe during much of the seventeenth and part of the eighteenth century. They attached utmost importance to industry and foreign trade because these activities alone could earn precious metals like gold. As a result, they favoured large population and large labour force.

According to Botero (1956), the strength of the state is to be found in its population and the predominance of industry over agriculture. However, he also noted that population tends to increase to the full extent made possible by human fecundity, while means of subsistence and their capacity to increase it were limited and, therefore, imposed a ceiling on population increase. This limit on population growth manifested itself through poverty which discouraged marriage, and through periodic calamities such as wars and pestilence. Batero advocated at the same time that population increase would strengthen the power of the state. Thus, the mercantilist writers in general stressed the advantages of large and growing population and favoured policies of stimulating population growth including measures to encourage marriage and large families, to improve public health, to check emigration to other countries and to promote immigration especially of skilled workers.

Population was not only an important factor in the power of the state but also played a role in increasing the state's revenue and wealth. They asserted that the density of population is the basis of wealth. He argued that when population is scarce, people can easily obtain their livelihood and that, as a result, they would become lazy. On the contrary, under conditions of high density people would have to work hard to live which creates attitudes favouring economic activity and industry. According to most mercantilist writers, the benefits of a larger population and additional labour would be particularly great, if they served to develop manufacturing. Manufactured products could yield increasing returns as they could be exchanged abroad for precious metals. The *physiocratic school*

of thought was in part a reaction against the ideas and policies proposed by mercantilist writers, and consequently opposed state intervention, trade regulation and other aspects of mercantilist thinking. Unlike the mercantilist, the physiocrats found the agricultural sector to be most strategic: the growth of the entire economy was supposed to be governed by the increase in agricultural produce. The physiocrats did not agree with the mercantilist policy of increasing population even at the expense of levels of living. Nevertheless, they took a generally favourable view of population growth on the condition that it was possible to expand agricultural production to support the increasing population.

Some of the ideas of the physiocrats were shared by Cantillon who in other respects can be considered a mercantilist writer. He believed that land was the main factor determining wealth, and that population would be limited by the amount of agricultural production. In his explanation of population trends, Cantillon distinguished between maximum people living at subsistence level and the wealthier classes such as royalty, landowners, etc., who were willing to either give up or postpone marriage in order to maintain higher standard of living. Immediate predecessors of Malthus like Condorcet and Godwin were optimistic about the future due to the influence of the French Revolution and the ideas of liberty, equality and fraternity. Adam Smith, the Father of Economics, was influenced by the Industrial Revolution in England. He advocated naturalism in his book 'Wealth of Nations' (1776) and expressed optimism about the future of world.

5.4 MALTHUSIAN THEORY

Thomas Robert Malthus was an English Clergyman, a wrangler in Mathematics by education and a college professor of History and Political Economy. His views on population provided the first systematic approach to study of population. His views were published in 1798 in his first essay "An Essay on the Principle of Population" which emphasizes that population

affects the future improvement of society with remarks on the speculations of Godwin, Condorcet and other writers. William Godwin, a philosopher and social reformer, and Condorcet, a mathematician and philosopher, had tremendous faith in science. According to them, science would help to multiply the food supply, and men will be able to live with little work and more leisure. According to them, men's will-power is sufficient to control procreation. Contrary to it, Malthus (1798) put forth the 'pessimistic view' which stated that a large and growing population is a burden for the society and a cause of poverty, misery and all types of societal problems. He postulated that populations have a tendency to grow at a faster rate than the means of subsistence.

The basic assumption underlying Malthus' population theory is that reproduction is faster than production. He expressed this in mathematical terms, as it was easy to convey the message. According to him, population increased in geometric series (i.e. 1,2,4,8,16,32,. . .) while food production increased in arithmetic series (i.e., 1,2,3,4,5,. . .). That means, with every increase in population further increase becomes easier which is not exactly the same in the case of food production. However, he also stated that population is necessarily limited by the means of subsistence. Population invariably increases more than the rate at which means of subsistence increases unless prevented by some very powerful and obvious check. These checks, according to him are in the form of moral-restraint, vice and misery. The former two he termed as preventive checks and the later as positive checks. Under moral restraint, he considered late marriage, prostitution, extra-marital sexual relation and abortion; while epidemics, wars, famines, etc. come under the umbrella of misery. His theory is referred to as Malthusian dilemma or Malthusian trap. This is, of course, a different theory, which was stated by Ricardo later.

In general, Malthus appears to assume diminishing returns from land. Unrestrained population growth can be prevented by late marriage coupled with economical use of available resources. He substantiated his theory by reviewing the situations that prevailed in various countries. His theory was a landmark in the history of population theories. In recognition

of this, the population theories were later referred to as pre-Malthusian, Malthusian and post-Malthusian theories. He also stated that if wages of labourers are increased, they will produce more children and poor people will multiply. It implied that he assumed positive relation between income and fertility.

5.4.1 CRITICISM OF MALTHUSIAN THEORY

The importance of Malthusian theory can be measured by the number of books/articles written favouring or criticizing him. There are three major aspects in his theory which are subjected to strong criticism. They are:

- the assertion that food production cannot keep up with the population growth,
- the belief that moral restraint was the only acceptable preventive check, and
- the conclusion that poverty was an inevitable result of population growth.

Malthus' conclusion that population would double in a period of 25 years was based on the evidence of doubtful statistics. He placed undue emphasis on the limitation of the supply of land. David Glass criticized him as a poor prophet because his model did not consider the enormous impact of technological progress in offsetting the growth-inhibiting forces of rapid increase in population. The availability of food could be increased by improving production and productivity. All countries, therefore, have the potential of escaping the Malthusian Population Trap. The agricultural revolution of the nineteenth century brought rotation of crops, chemical fertilizers, plant and animal breeding and improvements in the quality of livestock which tremendously increased the agricultural production. The gloomy predictions of Malthus, therefore, did not come true. Moreover, it is argued that the tendency for diminishing returns in agriculture will be more than compensated by improved productivity in manufacturing. The

neo-Malthusians also believed that modern artificial contraceptives are better than moral restraint. He also could not visualize that with development more and more couples, even the poor, will accept contraception on their own. After industrial revolution one by one all the countries in Europe, America and Oceania experienced fertility decline. Further, the pessimistic attitude reflected in increased poverty was questioned in the light of technological development, which comes to the aid of mankind. It helps in improving the production, in discovering substitutes and in finding new sources of satisfying needs. Moreover, population pressure was eased by large-scale migration to the New World, a possibility which he did not foresee. It was also said that his ideas were not original and the usage of mathematical language was inappropriate. The use of arithmetic and geometric series was the weakest link in his theory.

5.5 DEMOGRAPHIC TRANSITION

Demographic transition explains a form of relationship between population and economic development. In the western countries it has been found that they have moved from a condition of high birth and death rates, to a condition of low birth and death rates which led to a slow rate of growth of population. This demographic change is known as 'Demographic Transition'. In other words, demographic transition describes the passage through which countries move from high birth and death rates to low ones. This has been the experience of countries going through a process of modernizing economic and social development. However, it must be kept in mind that, the reasons for this change are very uncertain. There is no simple, continuous and quantitative relationship between economic development and the decline in birth and death rates.

5.5.1 Stages of Demographic Transition

The inter-relationship between population and economic development may be divided into three stages:

- The first stage is characterized by high birth and death rates. These features give rise to low population growth. To understand the forces that generate this situation you have to remember a society whose economy is dominantly agrarian and level of technology is traditional. High death rates in such a society could be due to chronic malnutrition, famines and epidemics, inadequate medicinal and health services and poor living condition. High birth rates are influenced by the socio-cultural system (i.e. illiteracy, early marriage, traditional values, religious beliefs, demand for family labour, etc.). The difference between high birth and death rates becomes narrow resulting in one percent per annum or less growth rate of population. Sometimes, it may even tend to stagnate at a particular level.
- In the second stage of demographic transition, death rate begins to decline. There is beginning of the process of economic development. Better nutritional components are included in food and living condition improves. However, the birth rates continue to remain high. Consequently, there is an increase in the growth rate of population and it tends to grow quite rapidly.
- During the third stage when the country's economy is properly developed, the already low death rates decline further only slightly. Birth rate, on the contrary, goes down rapidly. The low birth and death rates are now stabilized resulting in a low population growth rate. It is expected that today's developing countries, if successful in their development efforts, would also reach the third stage of demographic transition.

In Europe, with improvement in agricultural techniques like crop rotation, use of fertilizers, use of agricultural equipments, etc. food production increased. This released some persons from agriculture who migrated to cities. At the same time, industrial development resulted in improved standard of living of masses.

General improvement in sanitation, changes in the habits of personal hygiene, medical improvement, immunization and so on helped to bring down death rates. All these changes had effect on fertility. People were motivated to obtain their desired family size through use of birth control methods. Thus, fertility also started declining slowly at first and rapidly later. This process of change from high birth and death rates to low birth and death rates has been called “demographic transition”. Demographers such as Landry (1909) and Warren Thompson (1929) had attempted to construct a typology to describe the transition from conditions of high mortality and high fertility to conditions of low mortality and low fertility. Blacker (1947) attempted to identify it into five phases:

- The high stationary stage - characterized by high birth rates and high death rates;
- The early expanding stage - characterized by high birth rates and high but decreasing mortality;
- The late expanding stage - characterized by falling birth rates but more rapidly decreasing mortality;
- The low stationary stage - characterized by low birth rates balanced by equally low mortality and
- The declining stage - characterized by low mortality and lower natality but deaths exceeding births.

5.5.2 Demographic Characteristics of Today’s Developing Countries

In today’s developing countries, regarding their population growth, we find that there are high population growth rates and inadequate opportunities for the absorption of manpower. The high population growth rates are due to high birth rate and fast declining death rates due to better sanitation and health facilities. However, the capacities to absorb increasing manpower are much weaker. Furthermore, the process of economic development tends to be more capital intensive under modern technological conditions, and

hence, has less potential of employment generation in the short run. Since the total size of the population is already large, there is urgency for speedy achievement of demographic transition from high birth rate to low birth rate resulting in lower population growth.



CHECK YOUR PROGRESS

Q 1: What is the Thomas Malthus Theory? (Answer in about 20 words)

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Q 2: What are the different stages of demographic transition theory? (Answer in about 60 words)

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Q 3: What is the basic assumption behind the Malthusian theory? (Answer in about 30 words)

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5.6 LET US SUM UP

- There have been divergent views on population situations which have contributed to formulation of important theories of population. Important of them are antiquity theory, Malthusian theory and theory of demographic transition.
- The population during ancient time was experiencing a high mortality due to lack of progress in science and technology. Therefore, the concern about population in ancient societies was restricted to

replacement of population lost through the unusually high mortality.

- Demographic change is thus one of the most pressing problems facing the modern world today. The problems are different, specific to societies and countries and are closely related to wider economic and social changes. Attempt to understand demographic change without reference to time and region- specific context has failed.



5.7 FURTHER READING

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5.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: The Malthusian theory of population is a theory of expontial population growth and arithmetic food supply growth.

Ans to Q No 2: Different demographic stages in the theory of demographic transition, according to C. P. Blacker (1947**),** are as given below.

- The high stationary stage - characterized by high birth rates and high death rates;
- The early expanding stage - characterized by high birth rates and high but decreasing mortality;
- The late expanding stage - characterized by falling birth rates but more rapidly decreasing mortality;

- The low stationary stage - characterized by low birth rates balanced by equally low mortality; and
- The declining stage - characterized by low mortality and lower natality but deaths exceeding births.

Ans to Q No 3: The basic assumption of Malthusian population theory is that reproduction is faster than production. According to Malthus, population increases in geometric progression while production increases by arithmetic progression.



5.9 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: Explain in brief the population theory of Antiquity.

Q 2: Mention the different historical contexts which have led to different demographic patterns in areas like Europe, India and Asia.

Q 3: Mention the criticisms of Malthusian Theory of Population.

Long Questions (Answer each question in about 300-500 words)

Q 1: Describe the demographic transition theory.

Q 2: Describe the limitations of the demographic transition theory.

Q 3: Discuss the basic assumption behind the Malthusian theory.

Q 4: Explain any three criticisms of the demographic transition.

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UNIT 6 : POPULATION THEORIES-II

UNIT STRUCTURE

6.1 Learning Objectives

6.2 Introduction

6.3 Understanding Post-Malthusian Theory

6.3.1 Criticism of Malthusian Theory

6.3.2 Understanding Neo-Classical School of Thought

6.4 Marxist Theory of Population

6.5 Biological Theories of Population

6.6 Optimum Theories of Population

6.7 Let Us sum Up

6.8 Further Reading

6.9 Answers To Check Your Progress

6.10 Model Questions

6.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- understand in details about why was Malthus criticized for his theory of population
- explain the neo-classical school of thought on population theory
- discuss how Karl Marx was different from Malthus regarding population study
- discuss the opinion given by the biologists on population growth
- discuss the optimum theory of population.

6.2 INTRODUCTION

In the previous chapter, we got various theories related to population growth and its consequences including Malthusian theories, demographic transition theories, etc. Here we will learn how incomplete Malthusian theory has led other thinkers focus on other aspects. The size and growth of population have always been viewed as an influential factor underlying the

development of any country. In different times and different contexts, many thinkers and philosophers have emphasized on the question of desirable size of population and the need for either encouraging or discouraging growth of it. The foundation of each thought was practical covering social, economic, political and military issues that helped to formulate particular public policies. Here, in this chapter we will discuss different theories related to population growth that contradicts Malthusian views of population.

6.3 UNDERSTANDING POST- MALTHUSIAN THEORY

6.3.1 Criticism of Malthusian Theory

In the previous unit we have already discussed the criticisms of Malthusian Theory. Let us learn some more details about it. The Malthusian theory of population has been severely criticized on several grounds like:

- Malthus over emphasized on land supply failing to justify the consequence of agricultural revolution of the nineteenth century such as rotation of crops, modern agricultural advancement with chemical fertilizers, plant and animal breeding and improvements in the livestock etc that carried a tremendous shift in the production of agriculture. Therefore, Malthusian predictions are regarded as gloomy and pessimistic.
- Malthus under-estimated the significance of industrial development and he almost neglected the faster and reliable modes of transport that helps to provide additional raw materials, an exploitable land supply and new markets for manufactured products.
- It is viewed that his religious beliefs prevented him from considering the possibility of the widespread use of contraceptives.

Philosophers like Kingsley Davis admitted the fact that although Malthusian argument is theoretically significant but empirically it was not valid. The ideas of Malthus have been severely

criticized. Post-Malthusian theories are the theories that came into existence after Malthusian notion regarding population and specifically as the resultant criticism of Malthusian thought. Post-Malthusian theories are initiated by those thinkers who have traced various angles to look into the matter of population that was missed out by Malthus. Malthus' conclusion that population would double in a period of twenty five years was based on the evidence of doubtful American statistics. Moreover, one argument against Malthus was that he did not clearly distinguish between fecundity- the psychological capacity to reproduce and fertility- the actual reproductive performance measured in terms of live births.

The classification of checks on population growth into the two categories of preventive and positive also came in for criticism and was cited as an example of "poor classification", for the two do not form "independent categories". Moreover, it was observed that Malthus could not complete his theory with the notions of positive and preventive checks.

Theories of economic growth hypothesize that the transition from pre-industrial stagnation to sustained growth is associated with a post-Malthusian phase in which technological progress raises income and spurs population growth while offsetting diminishing returns to labour.

6.3.2 Understanding Neo-Classical Schools of Thought

The Neo-Classical school of thought was founded by William Jerons, Carl Menger and Leon Walrus and their leaders were Alfred Marshall, John Bates, Clerk, Irving Fisher and Vilfredo Pareto. The neo-classical school of thought emphasized more on mathematical economics and the analysis of the psychological background and consumer demands, consumer decisions and consumer actions.

It is true that both the classical and neo-classical schools of political economists contributed to population theory with the

observation of the inter-relationship between population and production. According to the classical school of thought, increasing population was an asset to production, resulting in improved standards of living. The neo-classical school of thought maintained that population increase led to a lowering of production. The controversy arose due to the increase in population was considered by the classical school in terms of the number of hands that produce that leads to economic well-being whereas the neo-classical school viewed population growth exclusively in terms of the number of mouths to be fed. Due to the insufficient empirical and theoretical evidence, both the views were not proved conclusively.

6.4 MARXIST THEORY OF POPULATION

It is true that early socialist writers were concerned with the questions of population, but their views were not clearly stated. The credit of formulating consistent approach to the population problem may be given to Marx and Engels. Marxist and other socialist writers in general focused on capitalist social order. Moreover, they have claimed that if the reforms suggested by them are implemented, the productive capacity of human being would increase and with that the problem of unemployment and over-population would be checked.

Although all the socialist writers were against the Malthusian theory of population, their doctrine regarding population varied to large extent.

The Malthusian theory was completely rejected by Marx as it did not fit into his ideas of a socialist society. It is to be noted that Marx and Engels did not formulate a separate population theory but they set forth basic principles which according to them would determine population size and its socio-economic correlations. Marx said there could be no natural or universal law of population growth. According to him, “An abstract law of population exists for plants and animals only, and only in so far as man has not interfered with them.” In this view, the population law was peculiar only to the capitalist systems of production and that the tendency

of over-population was inherent in that system and was not due to excessive reproduction.

Engels supported Marxist views of population size and he added one point from his own side. He talked about "**social reorganisation".** According to him, it is true that under the capitalist system surplus population was associated with surplus capital but such contradiction inherent in capitalism could be overcome only by 'social reorganisation' or reorganizing the current social order.

Marx basically believed that the nature of economic relations in Europe's industrial societies was the central problem for the world's rapidly growing population. He said it is capitalism which is the cause of all ills. Marx argued that when society is well ordered, increases in the population should lead to greater wealth, not hunger and misery. In contrast, he saw that the problem was the evils of the capitalistic order of society. He emphasized that the system of capitalism has the capacity to produce food and other necessities, but it was the unequal distribution of social and economic wealth that undetermined production. Marx held that poverty and unemployment were not due to increased population, but on capitalist system which failed to provide jobs. Surplus population was the consequence for real production and uneven distribution of wealth and for providing jobs to only a few people.

Socialist views on Birth control: Both *Communist Manifesto* by Marx and *Origin of the Family* by Engels have emphasized on the emancipation of women from household drudgery. However, it was not clearly stated there whether they should be emancipated from excessive child bearing. Engels, in a letter to Kautsky, wrote about the "abstract possibility' which means the number of persons in a communist society might have to be limited by conscious control. A German socialist, Augustus Bebets confined her analysis to the status of women under capitalist and socialist societies. According to her, population in a socialist society would increase more slowly than a bourgeois society because of the superior status of women under socialism.

Later socialists indicate that they support responsible parenthood.

The Marxists are of the view that in a socialist society, reproductive behavior would develop a complete harmony between the individual and society. Though they are generally opposed to the theme of birth control as an independent means to fight the socio-economic causes of poverty, the modern socialists hold the view that birth control contributes to the emancipation of women by "combining happy maternity and creative work". They say to that extent birth control is accepted and with that logic even abortion is permitted in the modern socialists countries of Europe.

6.5 BIOLOGICAL THEORIES OF POPULATION

The biological theories are mainly concerned about human fertility. Most of the biological theories of population growth assume the existence of the metaphysical will of Nature to perpetuate the species, which is not accepted by the demographers.

- **The Density Principle:** Michael Thomas Sadler, an English liberal political economist, in his popular work *The Law of Population* was concerned mainly about refutation of Malthusian theory. He also contributed independently to population theory. He introduced a principle that says that fertility varies inversely with the density of population. Countries like the Netherlands have high fertility and density rate. Sadler pointed out a distinctive correlation between fertility and mortality- "the prolificness of an equal number of individuals, other circumstances being similar, is greater where mortality is greater." According to him, increasing fertility is today nothing but a function of increasing mortality. According to his theory, however, increasing density decreases fertility but increases mortality, which in turn increases fertility. It is difficult to reconcile to this kind of logic.
- **The Diet Principle.** Thomas Doubleday, another English political economist propounded a theory what he termed as *the true law of population* in the year 1841. By his theory, he basically tried to attempt a relationship between population growth and diet of the people. He says that poverty stimulates population growth since the poor have insufficient diet. He based his principle on the well known

fact about the animal world: rabbits and swines "will not conceive if fed to a certain height of fatness." He observed that the Chinese, the Irish and the Scotch were highly fertile because their diet was inadequate; the birth rates in France were low because the French were well-fed.

Josue de Castro, in his book, *Geography of Hunger,* contended that deficiency of proteins make under-nourished people more fertile than those who are well-nourished. He based his conclusions on the negative correlation between the protein content of the diet and the birth rates of various countries.

But demographers did not accept Doubeday and Castro. Because the demographers maintained that fertility variations are associated with business cycles, which are actually not related to diet. Many countries in the West experienced an upsurge in fertility once economic recovery set in (1937-38) following the Great Depression of the early 1930's. The phenomenon cannot be attributed to low protein consumption. Even if it is obvious that reproductive capacity is determined by diet, the utilization of the available food depends on many other social, psychological and economic factors too. Ralph Thomlinson criticized Castro's theory by saying that "He might as well have considered the correlation between national fertility and consumption of ice-cream soda, use of washing machines or watching of televisions."

- **Biological Theories of Spencer and Gini:** Herbert Spencer introduced that fertility increases in response to the progress of society and that in fact is a great agency for mankind's advancement. This theory was introduced in the year 1880. He added that when population growth becomes excessive and threatens the very existence of the human species, individuation steps in and resolves all these difficulties.

  Another Italian biologist Corrado Gini put forward a theory which is known as cyclical theory of population which states that population tends to follow an evolution which is similar to that of the life cycle

of the individual passing though the successive stages of development, maturation and involution.

6.6 OPTIMUM THEORIES OF POPULATION

The theory of optimum population was popularized by the English economist, Edwin Cannan (1861-1935). The basic ground for the optimum theory of population is formulated by the relationship between population and resources. The first attempt of this theory is believed to be initiated by the German Professor, Karl Winkelblech in some of his writings while analyzing population theory and policy. In that he classified nations into some categories-

- Under-populated nations
- Over-populated nations
- Nations with normal populations (with favourable size of population to the greatest possible productivity)

Cannan used the term 'optimum population' as synonymous with the best possible population and specified the term like this, "At any given time, the population which can exist on a given extent of land, consistent with the greatest productiveness of industry at that time, is definite."

The concept of optimum population has been interpreted in various ways by various thinkers. Some thinkers have justified the term "to mean the size of the population which results in the highest per capita income, the highest productivity as measured in different manners, or the highest level of living, real income and, in some cases, employment."

Some writers found this term too confined to use as 'economic optimum'; therefore they suggested it in total well-being, health, longevity of a nation, the ideal family size, the conservation of natural resources, power, defense and other spiritual, cultural and aesthetic factors. For many writers, in optimum population theory, the economic aspect was the most considerable factor. Gradually the idea of a population of optimum size for maximum production was accepted.

One noteworthy aspect of the optimum theory of population was that it was a reconciliation of the optimistic and pessimistic theories of

population which indicates that the growth of population is beneficial up to a certain point after which it does not remain beneficial but becomes harmful.

The idea of an optimum population drew mass attention in the 1920's and 1930's.

- **Criticism:** The optimum theory of population has been criticized on several grounds. Many thinkers have expressed their doubts regarding the universal meaning for the word 'optimum'. According to them, the concept of optimum itself is ambiguous. In fact, very few attempts have been made to determine the optimum size of the population of any country. For instance, an American demographer put the optimum population size for the United States of America at 120 million. Alfred Sauvey, the French thinker has given this figure in between 50 to 75 million for France. Coale and Hoover with a conclusive note, said that one-fourth of the rural population of India was useless.

  According to some other critics, the very concept of the optimum population is quite static in nature. For them, the theory is based on some assumptions of *ceteris paribus* condition for all other possible factors such as technology, resources, social structure, external trade, etc. Such assumptions are, of course, highly unrealistic.

  In fact, Sauvey has extended his idea with a greater length not as an absolute theoretical concept but as a convenient tool to refer optimum population as "that population which best assures the realization of a pre-determined objective."



CHECK YOUR PROGRESS

Q 1: What does the diet principle of population say? (Answer in about 30 words)

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Q 2: What does the optimum theory of population say? (Answer in about 30 words)

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Q 3: What does 'ceteris Paribas' mean? (Answer in about 10 words)

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Q 4: Define 'social reorganisation'. (Answer in about 10 words)

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6.7 LET US SUM UP

- In different times and different context, many thinkers and philosophers have emphasized on the question of desirable size of population and the need for either encouraging or discouraging growth of it.
- According to Doubleday poverty stimulates population growth since the poor have insufficient diet. He based his principle on the well known fact about the animal world.
- The biological theories are mainly concerned about human fertility. Most of the biological theories of population growth assume the existence of the metaphysical will of Nature to perpetuate the species, which is not accepted by the demographers.
- Cannan used the term 'optimum population' as synonymous with the best possible population and specified the term like this, "At any given time, the population which can exist on a given extent of land, consistent with the greatest productiveness of industry at that time, is definite."
- Cyclical theory of population states that population tends to follow an evolution which is similar to that of the life cycle of the individual passing though the successive stages of development, maturation and involution.
- The basic ground for the optimum theory of population is formulated by the relationship between population and resources.
- The Malthusian theory was completely rejected by Marx as it did not fit into his ideas of a socialist society.

- Marxist and other socialist writers in general focused on capitalist social order. Moreover, they have claimed that if the reforms suggested by them are implemented, the productive capacity of human being would increase and with that the problem of unemployment and over-population would be checked.
- Engels supported Marxist views of population size and he added one point from his own side. He talked about "**social reorganisation".**



6.8 FURTHER READING

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6.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Diet theory of population tries to attempt a relationship between population growth and diet of the people. He says that poverty stimulates population growth since the poor have insufficient diet.

Ans to Q No 2: The optimum population means the best and most desirable size of a country's population. This theory basically talks about the relationship between population and natural resources.

Ans to Q No 3: Ceteris Paribus is a Latin phrase meaning "other things being constant".

Ans to Q No 4: Social reorganisation means re-organizing the current social order if there is some disorder or lack of equilibrium.



6.10 MODEL QUESTIONS

Short questions (Answer each question in about 150 words)

Q 1: What do the biological theories mainly emphasize on?

Q 2: What is meant by 'optimum population'?

Q 3: Explain in brief why Marx has rejected Malthusian theory of population.

Q 4: What is cyclical theory of population?

Q 5: Write about the socialist view of birth control.

Long questions (Answer each question in about 300-500words)

Q 1: State the differences between classical theories and neo-classical theories of population.

Q 2: What is Post-Malthusian theory of population?

Q 3: Discuss Marxist theory of population.

Q 4: Explain the optimum theory of population.

Q 5: Describe biological theories of population.

Q 6: Discuss how the matter of women emancipation is discussed in the writings of socialist writers.

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UNIT 7 : POPULATION GROWTH AND DEMOGRAPHIC TRANSITION

UNIT STRUCTURE

7.1 Learning Objectives

7.2 Introduction

7.3 Determinants of Population Growth

7.4 Consequences of Population Growth

7.5 Causes for the Rapid Growth of Population in India

7.6 Population Bomb

7.7 Theory of Demographic Transition

7.8 Let Us sum Up

7.9 Further Reading

7.10 Answers To Check Your Progress

7.11 Model Questions

7.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- understand the factors that determine growth of population
- explain the consequences of massive population growth
- discuss the causes for the rapid growth of population in India
- analyse the major demographic trends in India
- elucidate the concept of “population bomb”

7.2 INTRODUCTION

Human beings are endowed with reproductive capacity like other species of plants and animals, which, if unchecked, may result in great increase in numbers. Population growth and density are responsible for some of the challenges we face with our environment. There is a possible fear for the entire human species if they can sustain the current way of living with the given size of the national and world populations. Two demographic variables, fertility and mortality are responsible for world

population growth. When the world situation of population growth is considered, the migration is not considered as much effective factor. The term 'Population Growth' or 'Population change' is used in its broadest connotation to cover changes in population numbers; in fact this change in the number is a continuous process. This chapter is sought to analyze the factors that affect in the increase in numbers worldwide in general and also in particular.

7.3 DETERMINANTS OF POPULATION GROWTH

The term population growth is used to refer to the changes in population numbers, inhabitants of a territory during a specific period of time irrespective of the fact that the change may be positive or negative. Population growth varies from nations to nations and among different regions of a nation. These variations are caused by several factors, sometimes directly and sometimes indirectly. Some of the prominent determinants are demographic, economic, social, political and also technological. These factors are discussed below:

- **Demographic Determinants:** It is one of the principle determinants of population growth. It Influences through the degrees of fertility, mortality and migration. Fertility and mortality are considered as more important factors than migration. The rate of growth is primarily determined by the co- relation between birth and death rates. Migration also affects growth, but in respect of regional variations and open populations only. Otherwise it is not much effective as a determinant of growth of population. Fertility as an important determinant of population growth, does not concern only to women themselves but also that community which they belong to. Fertility has a direct impact on the growth, size and structure of a population in greater scale. The growth of the population depends mainly on fertility. In population dynamics fertility is the positive force, through which the population expands, counteracting the forces of attrition caused by mortality. If this replacement of human beings is not adequate i.e. if the number of deaths in particular society continues to be more than that of births

the society would face the danger of becoming extinct. Apart from the immediate effects of fertility on the size and growth of population fertility change (upsets) the age structure of population which as a result of it determines the proportion of population in different age groups. A high fertility includes an age structure which is highly weighted towards the younger ages.

Historically also, the mortality had played a dominant role in determining the growth of population, the size of which fluctuated in the past mainly in response to variations in mortality. After the industrial revolution, the increase in the population of European countries was mainly due to a decline in the death rates. The developing countries, which are undergoing a typical demographic transition, have also been affected initially by the decline in the death rates. In India, too the most important factor that has caused a very high growth rate which kept the population during last four decades has been the sudden and phenomenal fall in death rate and before independence it was the high mortality rate which is responsible for the much feared population explosion. Migration is the Third dynamic constituent of population growth. A population may gain in size by experiencing an influx of migration and it may diminish in size by an exodus of some of its members to join another population. All sort of migrations have played a very important role in the history of population growth in most of the countries.

The only principal mechanism for the wide variations in population growth rate is internal migration. The rural to urban migration is usually associated with industrialization and urbanization. Migrants from the rural areas develop a tendency to adopt the urban way of life, which in turn has a direct impact on reducing the fertility. Migration may change the size, structure and sex ratio of the population quite drastically at any point of times. Regional growth rate results from both differential natural increase and migration increase leading to growth of population.

- **Economic Determinants:** Economic factors are also important

determinants for their potential for affecting population growth. It might be assumed that economic hard times would cause people to migrate in search of jobs and thus increase migration. However, since the rate of migration actually falls at the time of difficult economic situations, one could speculate that there is reluctance to leave familiar places. The Time honored adage that population grows in response to the demand for labor has the characteristics of an over worked half- truth it is eminently reasonable, yet presents only one side of the problems certainly the massive demands for labor by the expanding American economy in the nineteenth century did lead to emigration from the old world just as the industrial revolution in Britain created the opportunity for rural urban migration. But it is also acceptable that there can be population growth without having a demand for labor, while labor shortages can be chronic without inducing population growth. The economic factors also influence population growth through the standard of living. The inverse relationship between improving living standards and mortality has often been observed by several thinkers at different point of times. Particularly as it weeks through the pattern of better diet, clothing and housing to ameliorate the worst excesses of those diseases which stem from under nourishment and poverty. In advanced countries the progress towards ever higher standards of living and wages was self perpetuating and it could be stopped only by perversion of the system. Moreover, basic changes in the economic development associated with the agricultural manufacturing and tertiary states of development always put strains on the structure of population. In nineteenth centuries it was fully observed that the increase of food supply regulated the growth of population many a time directly and sometimes indirectly.

- **Social Determinants:** The social class factor is the most influencing factor in accounting for differential population growth. The patterns of mortality, fertility and migration are empirically related to differences in class situation. The pure social factor can be understood through

a large variety of factors. The cultural, religious, linguistic, ethnic and racial characteristics of a population growth are important in giving it a distinctive demographic structure. Such attributes are often used as scale of inferiority or superiority and are thus potential means of self or imposed isolation, which can itself have a variety of demographics and spatial expressions. The oppression involved has also established demographic distinction between minority and majority. For instance, the relative social position of woman, the form of marriage pattern, the organization of family groups, whether nuclear or extended are some of the social factors that matter to spatial expressions.

- **Political Determinants:** The rapid growth of world's population with its consequent demand for more food supply, keeps the world in a state of potential crisis. The green revolution in different parts of the world, brought out more productive cereals like a miracle in some places like Philippines and Sri Lanka and wheat, in Mexico, India, Pakistan let the populations score a point only temporarily over the promotion of the issue of great priority. Japan which achieved a precipitous decline in its birth rate mainly through abortions, still remains the prime example of the east to have contained the crisis successfully. Ironically, the population control measures in the recent part have not been very effective in the large sized less developed countries like India, Indonesia, Pakistan where the crisis is felt most strongly. In such countries the problems are great in number: the annual increment is substantial; the masses are illiterate; the majority of population continues to struggle to wrest a meager harvest from landholding. To improve the productivity and production in the agriculture sector such countries are not technologically sound and utilising labour intensive technology, which still appears to lie in more man power, and that inhibits the acceptance of the realization about the need for birth control measures is meager. Also the dissemination of the required information and devices to control births is slow and difficult. It is also an expression of an assortment of variables which

are concerned with resulting population growth. The distinctive government policies enacted in the nation are bound to have impact on the size and structure of the population. The effects of political factors are not of course, limited to child bearing. Immigration and migration laws and policies can have a significant impact on the movement of people from country to country and place to place which can have the effect of decreasing death rates.

- **Technological Determinants:** The technological determinants of population growth comprises of the following aspects-
  - invention,
  - practical development adoption and
  - mass use

  These determinants are of varying degree responses to stimulation from the other determinants. Advances in medical, transport, agricultural and industrial technologies have contributed to rapid population growth. Medical advances in the field of contraception, oral technology have meant that birth control can now be practiced effectively by the many millions of women who wish to space out the children's births and limit their completed family size. However these developments have not been always whole beneficial. The ever widening gap between the technologically advanced western states and those in the third world means that health services are differentially distributed and there are wild slipperiest in living standards both having important implications for long term rapid population growth. There is a need to comprehend these determinants and to work on these factors to keep a check on the increasing population.
- **Improvement in Public Health:** Now-a-days, people are aware about their survival issues and basic needs such as food, water and shelter. Before 1990, less than 50% of people had the access to safe drinking water. Many people died of water related diseases such as cholera, malaria etc. Now- a -days people have the concerns about safe and sustainable water. Secondly, people are hankering after improving food

supply, ending mal nutrition, improving living standard, providing adequate housing which in turn lead to a decline in death rate.

- **Food Production Distribution:** The remarkable fact about the last 150 years is the capacity to increase food production in many places. In the last two centuries, in many places, the practice of agricultural production has improved to a greater extent.

Each of the above mentioned determinants plays its role in its own way and each need to be tackled with designing and implementing specific framework and guidelines.

7.4 CONSEQUENCES OF POPULATION GROWTH

If the population size exceeds the reasonable limit, problems start coming into existence as a threats for livelihood with various scales. Here some of the consequences of rapid population growth are discussed.

- **Population and Poverty:** Poverty and excessive population growth often go hand in hand. In fact in many cases these two phenomena cohabit as cause and effect.
- **Unemployment and Underemployment:** Not only new born individuals are to be fed and sheltered but also they are to be provided with jobs. New jobs are to be created for the new hands but it is not easy to create jobs. There is already unemployment coupled with underemployment which gives birth to other related problems.
- **Low Per Capita Income:** During the past 50 years of planning, the national per capita income of this country has increased by about 3.6% per annum. But the rate of increase is too low per annum. The low per capita income of India is attributed to rapid population growth.
- **Shortage of Food:** Country like India, even though has attained self-sufficiency in food production, but is unable to produce enough of food sufficient for the mass population. As a result, a greater portion of human-being suffers from mal nutrition and other diseases related to insufficient nutrition. This will increase the cost of the social overheads. For every government, it is quite difficult to find sufficient funds to meet these unproductive expenses.

- **Increased Burden of Social Overheads:** When there is rapid growth of population in the country, the government is required to provide the minimum facilities for the people for their comfortable living. Hence it has to increase educational, housing, sanitation, public health, medical, transportation, communication and other facilities.
- **Population and Labour Efficiency:** Since an increase in population reduces per capita income, the standard of living of the people deteriorates. This affects very badly on the health and productive efficiency of the workers. The physical as well as mental efficiency become low.
- **Population and the Standard of Living:** Standard of living connotes the quantity and quality of consumption of the people. The rapid growth of population often affects adversely on standard of living.
- **Population and Pressure on Land:** Land is limited natural resource that can not be produced in order to offer space to the increased population. The supply of land is fixed in nature. An increase in population can put heavy pressure on it degrading its quality too.
- **Increased Unproductive Consumers:** When there is a rapid growth of population in a country like India, there will be large proportion of unproductive consumers. Rapid growth of population contributes to an increase in the dependency ratio.
- **Slow Economic Development:** Economic development is bound to be slower in a country in which the population is growing at a very fast rate. Absence of savings results in low capital formation. The shortage of capital has restricted investments and contributed to the slow economic growth of the country.
- **Political Unrest:** Unmanageable population size may contribute to political instability and unrest. The failure of the government to provide the basic minimum facilities to the people contributes to agitation and unrest among the masses.
- **Climate change:** Due to over population, there can be seen a massive climate change worldwide. The matter of climate change has become a mere threat to all sorts of animals and species.

- **Environmental Disorder:** Due to the overpopulation there can be seen various imbalance in natural environment. Carbon footprint, various kinds of population, global warming are some of the bad effects of over population.
- **Growing Urbanization and Slums:** Overpopulation results in the creation of city and urban life. It gives rise to crowd and slums too.

7.5 CAUSES FOR THE RAPID GROWTH OF POPULATION IN INDIA

In India, several factors have contributed to the rapid growth of population in India. Some factors are discussed below:

- **Peaceful Conditions:** For nearly a century, India enjoyed relative peace without involving herself in major inter-conflicts or war lie situations after the establishment of British rule. Peaceful conditions provide an impetus for thinking about reproduction that lead to over-population.
- **Improvement in Transport Facilities:** It has helped people to avail the medical and health facilities without many difficulties. It has saved countless lives and added to the size of the population.
- **Social Attitudes of Indians:** Poverty, illiteracy, ignorance, absence of recreational facilities, attitudes of conservatism, orthodoxy, extreme religiosity, a sense of resignation towards life, looking upon children as old age pension, etc. are responsible for the rapid growth of population.
- **Excess of Birth over Death:** Population growth depends on the excess of births over deaths. Death rate has been gradually declining in India.
- **Progress in Medical Knowledge:** The advanced medical knowledge and its application have considerably reduced the death rate. It has helped us to control the spread of life-taking diseases like Malaria, T.B., Cholera, Plague, Influenza, Smallpox, etc. and protected the people from the jaws of death. Positively, it has added to greater population, because those persons saved from the death also produced children to contribute to the existing numbers.

- **Social factors like Universal Marriage, Child Marriage, and Early Marriage:** These social factors have contributed a lot in the population increase. Indian tradition prescribes marriage as a social obligation and it's quite noticeable that almost all marriageable persons are in a married state. Particularly for the women, woman is almost an inescapable obligation. Further, the number of children born per couple is also large.
- **Lack of Conscious Family Planning:** Among the married couple in India, it has been observed that there is a lack of proper family planning. The illiterate masses are ignorant about the use of contraceptives. People feel that more children are wanted for economic purposes.
- **The Climatic Conditions of India:** This is another conducive factor that influences the growth of population. The tropical climate stimulates sex urge. **Montesquieu** said that people of warm land are more sex-indulgent. Further, girls become physically mature at an early age ranging from 11 to 15 years of age. After puberty, their chances to become married go higher and in return they become positive influential factors of increase in population.

7.6 POPULATION BOMB

Very recently, a modern Malthus has appeared in the form of Paul Ehrlich along with his wife Anne Ehrlich. Ehrlich has written a book *The Population Bomb* (1968) where he argued that many of the dire earlier predictions of Malthus were not far from wrong. He claims that the growth in world population is equivalent to a time bomb ready to go off in the near future, with dismal consequences. He emphasized on the fact that the sheer mathematics of population growth worldwide are sufficient to demonstrate that world population cannot possibly continue to expand at its present rates.

The Ehrlich couple pointed out that worldwide population growth has outgrown food production and that massive starvation must inevitably follow. They were among the earliest modern thinkers who focused in the correlation between population growth and environmental issues. They

argued that the quality of the environment, especially the availability of clean air and water, was a critical factor in the growth and health of populations. Regarding their justification, they pointed to mass starvation in many parts of Africa, the intensity of hunger and poverty in the United States among Black and Hispanic populations, increased homelessness in the cities, rampant extinctions of several species of plants and animals, and irrecoverable destruction of environments such as the rain forests, as evidence of the massive threats if population growth and environmental degradation are not checked.

7.7 THEORY OF DEMOGRAPHIC TRANSITION

The theory of demographic transition is based on the actual population trend of the some of the advanced countries of the world. It is the reflection of the population trends which have moved from a condition of high mortality and high fertility with consequent slow growth of population to conditions of low mortality and low fertility once again leading to a slow growth of population. The theory focuses on changes in birth rate and death rate and the consequent yet fluctuating growth rate of population.So, this theory is an attempt to grasp the process of change from situation of high mortality and high fertility to a situation of low mortality and low fertility.

The theory of Demographic transition explains the effects of changes in birth rate and death rate on the growth of population. According to E.G Dolan, “Demographic transition refers to a population cycle that begins with a fall in the death rate, continues with a phase of rapid population growth and concludes with a decline in the birth rate.” According to this theory, there are certain stages of population development and almost every country has to pass through these stages. The theory of demographic transition has been popularised by W.S Thomson and F.W. Notestein along with various other theorists who have contributed towards the solidification of the theoretical framework of the Theory of Demographic Transition.They have divided the process of transition of population into five stages. They are as follows-

- **High stationary stage:**

  It is the preliminary stage of a society which is characterized by ***high birth rate and high death rate*** resulting in low population growth. In this stage, majority of population lives in the countryside and depends on agricultural output which has lower productivity leading to poverty in the society. Along with this, people are mostly illiterate and live in dirty, unhealthy and unventilated houses. All these social and economic factors are cumulatively responsible for high birth rate and high death rate in this society resulting in a static equilibrium in population growth.

- **Early expanding stage:**

  In the second stage, the economy is supposed to enter the phase of economic development in which all sectors of the economy- agriculture, industry, trade, transport, service sector start developing. The productivity in the sector increases. Medical, health and education services also largely improve, which has been reflected in the fact that the ***death rate comes down considerably, but birth rate almost remains stable.*** This leads to a situation of 'population explosion' in the economy. This stage has been referred to as early expanding stage when population grows very rapidly due to declining death rate and birth rate remains almost unchanged.

- **Late expanding stage:**

  In this stage, a ***declining birth rate and low death rate*** lead to a situation of low population growth. Along with economic development of a country, structural changes in each country begin to take place. In this stage, large numbers of industries are established in the country. A major part of population begins to reside in urban areas. People now start to treat children as a liability more than an asset. In this stage, couple prefer to have a car or any luxurious items than a child in order to maintain a high standard of living in the society. Consequently, birth rate begins to fall and death rate remains low. Thus population growth grows to a phase of diminishing growth.

- **Low stationary stage :**

  In the fourth stage***, the birth rate comes down and tends to be equal with the death rate,*** resulting in a situation of decline in the population growth. The leading growth sectors like agriculture, industry and trade expands and pass through technological transformation. The levels of education, income, savings, investment and employment rises. Most of the advanced countries in the world are passing through this stage of low stationary growth of population development.

- **Declining stage :**

  In this last stage of population growth, the economy reaches a phase when continuously ***declining birth rate is accompanied by the lowest death rate***. This trend leads to a declining stage of population growth. This stage in any advanced country is an imaginary phenomenon.

Critical Evaluation of the theory of Demographic Transition

The theory of demographic transition is widely accepted as an important theoretical orientation towards the study of population growth. However, various questions has been raised by various critics regarding the practical implication of this theory. According to some eminent scholars this theory is only precises the empirical experiences which is common to sociologists but criticized by others. Again, this theory cannot be used for making predictions and it fully ignores the role of migration. Even this theory does not explain the causes of changes in birth and death rates. So, considering these understanding the various criticisms of Demographic Transition theory have been discussed below-

- Critics have pointed out that the sequences of the demographic trends or different stages of population growth as discussed in the theory is not uniform in nature. For instance, in some East and South European countries like Spain in particular, the fertility rates declined even when mortality rates were high. But in case of countries like Unites States of America, the growth rate of population was higher than in the second and third stage mentioned in the theory of demographic transition.

- The theory has failed to give a fundamental explanation of decline in birth rates in Western countries. In fact, the causes of decline in birth rate are so diverse that they differ from country to country.
- The critics have forwarded the idea that the theory of demographic transition cannot really be called as "theory" rather they would prefer to call it generalised implications.
- Although various theorists have tried to scrutinise the theory of demographic transition with a critical viewpoint, this theory has been recognised as the most acceptable theory of studying the trend of population growth.



CHECK YOUR PROGRESS

Q 1: How are population and poverty related? (Answer in about 20 words)

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Q 2: What are the aspects that technological determinants of population growth comprise of? (Answer in about 20 words)

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Q 3: How can marriage influence population growth? (Answer in about 50 words)

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7.8 LET US SUM UP

- The term population growth is used to refer to changes in population numbers, inhabitants of a territory during a specific period of time

irrespective of the fact that the change may be positive or negative.

- There are many determinants of population growth, i.e. economic, political, social, technological etc.
- Social factors have contributed a lot in the population increase. Indian tradition prescribes marriage as a social obligation and it's quite noticeable that almost all marriageable persons are in a married state.
- The advanced medical knowledge and its application have considerably reduced the death rate. It has helped us to control the spread of life-taking diseases like Malaria, T.B., Cholera, Plague, Influenza, Smallpox, etc. and protected the people from the jaws of death. Positively, it has added to greater population, because those persons saved from the death also produced children to contribute to the existing numbers.



7.9 FURTHER READING

1) Ashraf, D. N. Major Determinants of population growth. *International Journal of Human Resource & Industrial Research.*

2) Srivastava, S.C. and Srivastava, S. (2004).*Studies in Demography*.New Delhi: Anmol Publications Pvt. Ltd.

3) Raj, H. (2001). *Population Studies*. Delhi: Surjeet Publications.



7.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Poverty and excessive population growth often go hand in hand. In fact in many cases these two phenomena cohabit as cause and effect.

Ans to Q No 2: The technological determinants of population growth comprises of the following aspects-

- invention,
- practical development adoption and
- mass use.

Ans to Q No 3: Indian tradition prescribes marriage as a social obligation and it's quite noticeable that almost all marriageable persons are in a married state. Particularly for the women, woman is almost an inescapable obligation. Further, the number of children born per couple is also large.



7.11 MODEL QUESTIONS

Short questions (Answer each question in about 150 words)

Q 1: What is meant by Population bomb?

Q 2: How can overpopulation affect the standard of living?

Long questions (Answer each question in about 300-500 words)

Q 1: Explain the technological determinants of population growth.

Q 2: Explain the causes of rapid growth of population in India.

Q 3: What are the consequences of overpopulation?

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UNIT 8 : DEMOGRAPHY AND URBANIZATION

UNIT STRUCTURE

8.1 Learning Objectives

8.2 Introduction

8.3 Urbanization

- 8.3.1 Meaning
- 8.3.2 Size of Urbanization

8.4 Methods of Measurement of Urbanization

8.5 Factors Responsible for Urbanization

8.6 Problems of Urbanization

8.7 Let Us Sum Up

8.8 Further Reading

8.9 Answers to Check Your Progress

8.10 Model Questions

8.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- understand the meaning of demography and urbanization
- explain the methods of measuring urbanization
- discuss the factors responsible for urbanization
- analyse the problems of urbanization.

8.2 INTRODUCTION

This unit basically tries to trace the relationship between growth of population and urbanization as a result of it and also its consequences. All spaces are socially organized and transformed. We build the places we live in and the spaces in which we move around. For instance, if we look at the maps of different places we will know that different history, different cultures create different shapes of the places. Therefore, sometimes it can be called ‘social construction of space’. Great concentrations of people have always had the power to intensify the triumphs and tragedies of

human existence. Thus, the world's demographic, environmental and social problems are most pronounced in cities, especially in poor nations.

8.3 URBANIZATION

8.3.1 Meaning

Urbanisation implies the process where by an increasing proportion of a country's population came to live in urban areas in search of employment, better opportunity, better standard of living, better health and educational infrastructure and economic prosperity.In the past as most of the world population were concentrated on agricultural activities as their way of livelihood, so people were basically concentrated in rural areas. The trend of urbanisation was started just after the starting of the process of industrialisation in the world economy and the people in large numbers began to migrate from rural to urban areas. In urban areas activities of the people are primarily centered in government, trade manufacturer or allied interests unlike the rural areas where communities concerned ethiefly with agriculture.The speed or rate of urbanisation is depended on time and place and varies accordingly.

In short, urbanisation is a method by which rural areas become urban and urban society emerges.The people who migrated from rural to urban areas adopt the new way of urban living by participating in new urban social customs, which affect their interests, values and behaviour.

8.3.2 Size of Urbanization

For most human history, the sights and sounds of great cities such as Hong Kong, Rio de Janeiro, Paris or Los Angeles were completely unknown. The world's people lived in small, nomadic groups, moving as they depleted vegetation or searched

for migratory game. Humans survived for tens of thousands of years without permanent settlements. Cities first emerged in the Middle East, then arose on all the continents, but held only a tiny fraction of the earth's people until very recently.

Today, the population of the world's five largest cities exceeds the total planetary population when cities first developed. By 1950, nearly 80 cities had populations in excess of 1 million; by 2000 that number exceeded 250. By 2010, half of the world's population lived in cities. These figures testify to the steady march of **urbanization,** *the concentration of humanity into cities.* Urbanization not only redistributes the population within a society but also transforms many patterns of social life.

Urbanization is the process by which a community acquires the characteristics of city life and the 'urban' end of the rural-urban continuum. Growth of cities is the consequence of the elaboration of society. Urbanization refers to the increasing number of people that live in urban areas. It predominantly results in the physical growth of urban areas, be it horizontal or vertical. It simply refers to the population shift from rural areas to urban areas, the gradual increase in the proportion of people living in urban areas, and the ways in which each society adapts to this change. It is the process by which large numbers of people become permanently concentrated in relatively small areas forming cities and leading to population growth. Urbanization is closely linked to modernization, industrialization, and the sociological process of rationalization. Urbanization is relevant to a range of disciplines, including urban planning, geography, sociology, architecture, economics and public health. Growth of population in most of the developing countries is closely associated with growing urbanization. Urbanization is taking place at a relatively greater pace in India. The proportion of urban population in India increased from 10.84% in 1901 to 17.3% in 1951, to 25.7% in 1991, and to 28.53% in 2001. As per 2011 census, it crossed 30%, standing at 31.16%. In 2017, it increased

to 34%, according to the World Bank. According to the data of Census 2011, out of 121.02 crore total population of India 37.7 crore (31.16%) population reside in urban areas. And acording to the data of Census 2001, out of 102.87 crore total population of India 28.61 crore (27.81%) population reside in urban areas.

Cities are relatively new development in human history. Only about 12,000 years ago our ancestors found the earliest permanent settlement, setting the stage for the first urban revolution. As glaciers drew back at the end of the last ice age, people congregated in warm regions with fertile soil. At the same time, human discovered how to domesticate animals and cultivate crops. Whereas hunting and gathering demanded continual movement, raising food could require people to remain in one place. Domesticating animals and plants also yielded a material surplus, which freed some people from concentrating on food production and allowed them to build shelters, make tools, weave clothing and take part in religious rituals. Thus, the founding of cities, made possible by favorable ecology and changing technology, was truly revolutionary, enhancing productive specialization and raising living standards as never before.

8.4 METHODS OF MEASUREMENT OF URBANISATION

Urbanisation as a process has four dimentions viz. **degree of urbanisation, tempo of urbanisation, concentration and dispersion of population and components of urban growth**. These four dimensions of the process of urbanisation can be measured in the following way-

- **As pertantage of population:**

  In this method, the percentage of population living in an urban area can be calculated as

  $Pu = \frac{U}{P} X\ 100$

  where, Pu is percentage of urban population

  U is urban population

P is total population

This method of finding the degree of urbanisation is easy to calculate, compare and interpret. The information needed for this method is also easily available. This formula does not provide us any indication of the percentage of the population living in different types of towns.

- **Ratio of urban-rural population:**

This index can be calculated by dividing the urban population (U) by rural population(R) as follows-

$UR = \frac{U}{R}$ where, UR is urban -rural ratio

It is an useful index for historical comparision and also indicates tempo of urbanisation.

- **Size of locality of residence of the median inhabitant:**

This index also follows the same principle as that of median age.In this index, the entire population of a country is divided in two equal halves to find out the median inhabitant for a locality.This index is calculated by the following formula-

$$MI = Q_i + \frac{50 - PP_i}{PP_{i+1} - PP_i\ (Q_{i+1} - Q_i)}$$

where, MI is the median inhabitant

PP_i is the cumulative percentage of the population for the locality size just under 50 percent

PP_{i+1} is the cumulative percentage of the population for the locality size next to 50 percent category

Q_i is the super limit of the locality size i

Q_{i+1} is the upper limit of the locality size i + 1

- **Tempo of urbanization:**

The above methods of measuring urbanization provide the information of urbanization at a particular point of time.So calculating it for two times, we can obtain the rate of change in urbanization, which is known as tempo of urbanization.Such change may occur in any form like linear, exponential or hyperbolic.

- **Scale of urbanization:** The degree of urbanization is based on an arbitrary minimum size limit. It reflects the urban size hierarchy too. The formula for the measure of **scale of urbanization** is

  Su = ΣXY,

  where Su is the measure,

  X is the proportion of the urban population on units above a certain size

  and Y is the proportion of the table population in the same units.

It describes the projected average rate of change of the size of the urban population over the given period of time.

8.5 FACTORS RESPONSIBLE FOR URBANIZATION

Urbanization in the developing world occurs for various reasons. They are discussed below-

- **Natural Increase in Population:** Population is increasing in a rapid pace all over the world. With limited natural resources it becomes troublesome for these populations to survive. Therefore, they keep on searching for better opportunities and better facilities.
- **Rural to Urban Migration:** Predominantly rural traditions and cultures are being replaced by urban culture. As the towns and cities are expanding rapidly, working age people from rural areas migrate from the countryside to earn more money in the city. They leave behind the old and the young. This process is called **rural depopulation**.
- **Industrialization:** Industrialization has historically led to urbanization by creating economic growth and job opportunities that drew people to cities. Urbanization typically begins when industries, factories are established with a high demand of labour. Other businesses such as building manufactures, retailers, service providers then follow the factories and industries to meet the product demands of the working class. This in turn creates more job opportunities and demands for housing, establishing an urban area.
- **Spread of Education:** Urban areas offer more access for higher education to majority of the youth. It ensures availability of better

teaching with a competition of knowledge. It offers advanced and better access to libraries with better technology for the students. It produces ideas of latest trends of career world. It entails easier and better placement strategies for large number of students which attract people to shift to it.

- **Other Social Factors:** Poverty, unemployment, religious instability, conflicts, modernization of agriculture are some of the social factors that push people away from their rural areas to city areas.

8.6 PROBLEMS OF URBANIZATION

The problems of urbanization can be discussed as follows-

- **Globalization, Global Cities and the Global Souls:** Global cities are cities with considerable economic power, commanding global investments and the concentration and accumulation of capital. For Saskia Sassen, global cities stand out as key command points in the organization of the world economy, and are the key locations of the marketplaces for the leading industries. Global cities are the prime location of major corporate headquarters of TNCs, international banks and an international division of labour, with privileged foreigners who 'jet set' around the world. They have to be major centers of communication and a good air transport system is central. All global cities are connected by air to all other global cities.

  These global cities have led to a large number of people now living not in one society but in several simultaneously. Although, they are likely to have apartments in a number of cities across the world, their real home is probably the airport and the jet aircraft! These are what novelist Pico Iyer has called 'the global souls'.

- **The Urban Divide: Planet of Slums, Wasted Lives and Inequalities:** Many people across the world flee from their desperately poor villages in search of a life in the city. But cities do not produce wealth for many of their citizens. The most striking feature of the cities of modern world is the scale of their slums. They are characterized by immensely poor housing, overcrowding, poor

access to safe water and sanitation and insecurity. Instead of being a focus for growth and prosperity, the cities have become a dumping ground for a surplus population working in unskilled, unprotected and low wage informal industries and trade.

In 2010, there were around 800 million people living in such slums. The world slum population will probably grow by at least six million each year, reaching an estimated 889 million by 2020.

This is a kind of passive proletarianisation whereby traditional forms of works are dissolved and the great majority of people become part of a huge informal and unstructured labour market. The slums and shanty towns now spread for miles at the outskirts of the city. Then they offer them scavenging work, the refugee camps for the socially excluded, and miles and miles of 'make do' shelters.

Throughout history, the city has improved people's living standards more than any other type of settlement. The question facing humanity now is whether cities in poor countries will be able to meet the needs of vastly larger populations in the coming century. The answer, which rests on a heady mix of sociological understanding, grasping of international relations and global economic ties and, possibly above all, a concern for simple justice, will affect us all.

- **Environmental Problem:** The process of urbanization has created a big dent in the environmental health. The natural resources are depleted and this excessive use of technology and energy become a major source of pollution and today we live in a world that is highly polluted and unfit for living. Due to growing urbanization, various pollutions are caused like air pollution, noise pollution, water pollution, thermal pollution, global warming, deforestation, etc. Moreover, urbanization leads to radio active pollution that occurs due to accidental leakage by nuclear power plants and it poses a big threat to both human life and other animals life. Another pollution that is caused due to rapid urbanization is visual pollution that happens due to the over exposure of visuals in the cities in the form of signs, billboards, screens, high intensity lights, etc which are very disturbing. Thermal pollution is

caused by excessive amount of heat trapped in earth's atmosphere.

- **Increase in Crime:** Data shows that there is an increase in crime in urbanized areas. Historically, crime and urbanization have gone hand in hand. The simplest explanation is that, areas with a higher population density are surrounded by greater availability of goods. Committing crimes in urbanized areas is also more feasible. Modernization has led to more crimes as well. There is a greater awareness of the income gap between the rich and poor due to modern media. This leads to feelings of deprivation which can lead to crime. In some regions where urbanization happens in wealthier areas, a rise in property crime and decrease in violent crime is seen.

  Migration is also a factor that can increase crime in urbanized areas. People from one area are displaced and forced to move into an urbanized society. Here, they are in a new environment with new norms and social values. This can lead to less social cohesion and less control that leads to more possibility for crime.
- **Weaker Sense of Community:** The social thinker Louis Wirth has correctly said that urban settings do sustain a weaker sense of community than do rural areas. They do not produce strong solidarity among the dwellers. They create highly secondary relationships which may have adverse psychological effect on individuals. People are often self-centered and they have no concern for the fellow human beings.
- **Disintegration of Joint Family:** Joint family cannot be maintained in cities on account of high cost of living. People prefer to live in nuclear type of families so that cost of living might come down.
- **Strain from Competition:** In rural areas a man's role in life and society is fixed, well defined and assured. On the other hand, competition over urban resources on a large scale and to a greater extent is a regular feature of urban life.
- **Urban Tensions:** Physical irritations such as excessive noise, constant cacophony or mechanical sounds, incessant visual attacks on the eyes by multi-glared lights, mass congestion in public conveyances, restaurants, departmental stores and amusement

places, and the strain caused by daily commuting are some of the other problems of urbanization.



CHECK YOUR PROGRESS

Q 1: What is meant by urbanization?(Answer in about 30 words)

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Q 2: State the meaning of Net- Migration Rate. (Answer in about 50 words)

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Q 3: What is meant by global city?(Answer in about 50 words)

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Q 4: What is meant by tempo of urbanization?(Answer in about 30 words)

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8.7 LET US SUM UP

- Urbanization is a global trend reflecting the growing population of the world.
- Urbanization results from various factors like natural increase in the population, rural to urban migration, etc.

- People migrate from rural areas to urban areas in hope of gaining a better standard of living. They are influenced by pull factors that attract them to urban life, and push factors that make them dissatisfied with rural living.
- Urbanization affects the physical environment through the adverse impacts of over population, their activities and increased demands of resources.
- The pressures of urban living may lead to crime and other consequences of social deprivation.



8.8 FURTHER READING

1) John J. and Macionis, K. P. (2018) *Sociology: A Global Introduction.* United Kingdom: Pearson.

2) Srivastava, S.C. and Srivastava, S. (2004). *Studies in Demography*. New Delhi: Anmol Publications Pvt. Ltd.

3) Raj, H. (2001). *Population Studies*. Delhi: Surjeet Publications.



8.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Urbanisation implies the process where by an increasing proportion of a country's population came to live in urban areas in search of employment, better opportunity, better standard of living, better health and educational infrastructure and economic prosperity.

Ans to Q No 2: People's movement into a territory, commonly termed immigration, is measured as an in-migration rate, calculated as *the number of people entering an area for every thousand people in the population.* Movement out of a territory, or emigration, is measured in terms of the out-migration rate, *the number leaving for every thousand people.* Both types of migration usually occur simultaneously; their difference is called the net migration rate.

Ans to Q No 3: Global cities are cities with considerable economic power,

commanding global investments and the concentration and accumulation of capital. For Saskia Sassen, global cities stand out as key command points in the organization of the world economy, and are the key locations of the marketplaces for the leading industries. Global cities are the prime location of major corporate headquarters of TNCs, international banks and an international division of labour, with privileged foreigners who 'jet set' around the world. They have to be major centers of communication and a good air transport system is central. All global cities are connected by air to all other global cities.

Ans to Q No 4: The different methods of measuring urbanization provide the information of urbanization at a particular point of time.So calculating it for two times, we can obtain the rate of change in urbanization, which is known as tempo of urbanization.



8.10 MODEL QUESTIONS

Short Questions (Answer each question in about 150 words)

Q 1: What is meant by urbanization?

Q 2: Write a short note on size of Urbanization.

Q 3: Briefly explain the ratio of urban-rural population as a method of measuring urbanization.

Long questions (Answer each question in about 300-500 words)

Q 1: Describe the consequences of urbanization.

Q 2: Discuss the factors responsible for urbanization.

Q 3: Explain the methods of measurement of urbanization.

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UNIT 9 : DEMOGRAPHIC STRUCTURE OF INDIA

UNIT STRUCTURE

9.1 Learning Objectives

9.2 Introduction

9.3 Recent Trend in Indian Population Growth

9.4 Composition of Indian Population

- 9.4.1 Age Structure
- 9.4.2 Sex Structure
- 9.4.3 Religious Structure
- 9.4.4 Ethnic and Racial Composition

9.5 Occupational Structure of Indian Population

9.6 Changing Characteristics of Indian Population

9.7 Let Us Sum Up

9.8 Further Reading

9.9 Answers To Check Your Progress

9.10 Model Questions

9.1 LEARNING OBJECTIVES

After going through this unit, you will able to-

- describe the age structure of Indian population
- explain how sex composition affects the demographic structure of India
- discuss the religious and ethnic structure of Indian demography.

9.2 INTRODUCTION

A study of the structure and characteristics of population is an important aspect in demographic study. It is also known as 'composition of population' which embraces the following basic personal, social and economic attributes or characteristics of any population—age, sex, religion, race, ethnicity, etc. A population may be distributed into many sub-groups according to each of the above mentioned factors. For instance, when sex

is considered, the entire population may be classified into two groups, males and females; when religion is considered, the entire population may be divided into different religious groups. This type of analysis helps us to understand the proportional distribution of males and females in a given population, the percentage of illiteracy, etc. Such a study also aims at measuring changes, if any, in these characteristics over a period of time. India, being a diversified country on the basis of different attributes, can be studied vastly and in this chapter these attributes are discussed.

9.3 RECENT TREND IN INDIAN POPULATION GROWTH

At the beginning of 20th century, Indian population was around 238.4 million. In next one hundred and ten years it has increased four times and reaches a mark of 1210 million by 2011. Quite importantly, in the first half century, India grew by one and half times, while there is a phenomenal three-fold increase in the second-half of the century. The table below presents the Indian population from 1901 to 2011 Census, decadal growth, average annual exponential growth rate over 1901, progressive growth rate over 1901, sex ratio and urban population. The decadal growth during 2001-2011 has significantly declined in the post-independence period. The decline is from 23.87 percent to 21.54 percent for the period of 1981-1991 to 1991-2001. The decadal average exponential growth rate has declined to 1.64 percent to 1.97 percent per annum for the period 2001-2011 and 1991-2001. The decadal progressive growth rate over 1901 has advanced from 331.52 percent in the year 2001 to 407.64 percent in the year 2011. The decadal sex ratio (females per 1000 males) has advanced from 933 in the year 2001 to 943 in the year 2011. There is significant increase in urban population, from 27.8 percent in the year 2001 to 31.2 percent in the year 2011.

The Indian population since 1901 to 2011 can be broadly divided into four natural phases:

- Phase I during 1901-1921 : Stagnant Population
- Phase II during 1911-1951 : Steady Growth

- Phase III during 1951-1981: Rapid High Growth
- Phase IV during 1981-2011: High Growth with Signs of Slowing Down

Table 9.1: Growth of Indian Population 1901-2011

Census Year	Population (in Lakhs)	Decadal Growth (%)	Average annual exponential growth rate (%)	Progressive growth rate over 1901 (%)	Sex Ratio (Females/ 1000 Males)	Urban Population (%)
1901*	2383.96	-	-	-	972	10.8
1911	2520.93	5.75	-	5.75	964	10.3
1921	2513.21	(0.31)	-6.05	5.42	955	11.2
1931*	2789.77	11.00	11.31	17.02	950	12.0
1941*	3186.60	14.22	3.22	33.67	945	13.9
1951	3610.88	13.31	-0.91	51.47	946	17.3
1961	4392.35	21.64	8.33	84.25	941	18.0
1971	5481.60	24.80	3.16	129.94	930	19.9
1981	6833.29	24.66	-0.14	186.64	934	23.3
1991	8464.21	23.87	17.12	255.05	926	25.7
2001**	10287.37	21.54	10.54	331.52	933	27.8
2011**	12105.69	17.64	-0.47	407.64	943	31.2

Source: Office of the Registrar General, India

Fertility, mortality and migration are considered to be the determining factors of population growth of a country. So, by studying the trends of fertility, mortality and migration, we can get an idea of trend of population growth. In the following we are discussing the trends of fertility, mortality and migration in India in order to know in details about the recent trend in Indian population growth -

- **Trends of Fertility in India**

  Although, India is one such country in which fertility is very high, but in the recent times the fertility rate has shown signs of decline. The fertility rate has declined sharply from 5.9 children per woman in 1950s to 2.7 children per woman in 2016. It is projected that fertility rate would be stable from 2030 onwards. The Total Fertility Rate (TFR) in rural areas has declined from 5.4 to 2.5 from 1971 to 2016,

whereas the corresponding decline in urban areas has been from 4.1 to 1.8 during the same period. The Sample Registration System (SRS) 2016 shows that the TFR in 12 states has fallen below two children per woman and 9 states have reached replacement level of 2.1 and above. While Delhi, Tamil Nadu and West Bengal have the lowest fertility rates, Bihar has the highest fertility rate (3.5) in India. Similarly, Crude Birth Rate (CBR) at all-India level had declined from 36.9 in 1971 to 33.9 in 1981, registering a fall of about 8 per cent. During 1991-2016, the decline has been about 31 percent, from 29.5 to 20.4.

Table 9.2: Trends of TFR & CBR in India

Year	Total Fertility Rate	Crude Birth Rate
1911	—	49.2
1921	—	48.1
1931	—	46.4
1941	—	45.2
1951	5.9	41.7
1961	5.8	41.2
1971	5.2	36.9
1981	4.5	33.9
1991	3.9	29.5
2001	2.52	25.4
2011	2.3	21.8
2021	2.2 (estimated)	—
2031	1.9 (estimated)	—

Source: Various reports of National Family Health Survey

Age Specific Fertility Rate (ASFR) for women belonging to all ages has shown declining trends during the period from 1981 to 2011. The greatest fall is observed among the women above 40 years. The fertility among the youngest age group of 15-19 has also declined due to the increase in the average age of marriage. The peak fertility age group has also declined from 20-29 age groups to 20-24 age groups indicating significant fall in the average span of child bearing.

Table 9.3: Trends of Age Specific Fertility Rate

Group	1981	1991	2001	2011
15-19	0.056	0.037	0.028	0.031
20-24	0.188	0.142	0.149	0.197
25-29	0.186	0.130	0.137	0.153
30-34	0.137	0.087	0.085	0.070
35-39	0.088	0.054	0.047	0.026
40-44	0.046	0.032	0.031	0.009
45-49	0.021	0.020	0.027	0.003

Source: Various reports of Census of India

The TFR is still high among the Hindu and Muslims. Although the rate has declined from 2.47 and 3.06 in 2001 to 2.13 and 2.61 among the women of the two major religious groups in India, the rate is still above the replacement rate. The TFR is lowest among the Jains (1.2) followed by Sikhs (1.58), Buddhists (1.74) and Christians (1.99).

Table 9.4: Religion-wise Total Fertility Rate in India

Religion	Total Fertility Rate	
	2001 Census	National Family Health Survey, 2015-16
Hindu	2.47	2.13
Muslim	3.06	2.61
Christian	2.06	1.99
Sikh	1.86	1.58
Buddhist	2.29	1.74
Jain	1.5	1.20
Other	2.99	2.57

Source: Census of India, 2001 and National Family Health Survey, 2015-16

- **Trends of Mortality in India**

  Although the death rate shows continuously decreasing trend in India, it is still above the desired level. The declining trend in death rate started in India as early as in 1920s. Before that period death rate was very high due to frequent occurrences of famines and epidemics. The death rates even exceeded birth rates thereby resulting in a reduction in population size. Thus, the mortality rate in India has two phases – (a) Prior to 1921, the higher level of mortality

rate or the history of great fight against death, (b) The declining mortality rate after 1921.

Table 9.5: Crude Death Rate, IMR & MMR of India

Decade	Death Rate (Per thousand persons)	Infant Mortality Rate (IMR)			Maternal Mortality Rate (MMR)
		Male	Female	Total	
1901-11	42.6	290.0	284.6	221	-
1911-21	48.6	-	-	211	-
1921-31	36.3	248.7	232.2	176	-
1931-41	31.2	-	-	168	-
1941-51	27.4	190.0	175.0	148	-
1951-61	22.8	153.2	138.3	109	-
1961-71	18.9	131	221	106	-
1971-81	14.9	115	112	103	-
1981-91	9.8	84	90	89	560
1991-01	8.0	64	68	66	327
2001-11	7.1	43	48	47.57	178
2017	6.4	-	-	39.1	130

Source: Various reports of National Family Health Survey

Table-9.5 shows that the CDR in India increased from 42.6 per thousand persons in 1911 to 48.6 in 1921. After that the CDR has been continuously falling at a fast rate. It declined to 7.1 per thousand in 2011. Thus in the past one hundred years since 1911, the death rate came down to about one-sixth. Despite this achievement, India is still behind many of the developing countries like Sri Lanka, Indonesia, Maldives, Philippines, etc. The main challenge that India is facing is that of high infant mortality rate and maternal mortality rate. The infant mortality rate was abnormally high in the early part of the 20th century. It was as high as 290 for males and 284.6 for females in 1901-11. Similarly, maternal mortality rate is still very high in India in comparison to the global scenario. In fact, India accounts for 15% of the world's maternal death as of 2015. A number of socio-demographic factors are responsible for this high maternal

mortality. Again, state wise variation is seen in India with Kerela having the lowest and Bihar having the highest maternal mortality rate.

- **Trends of Migration in India**

  During the period of British rule, a large number of people from India had to move involuntarily to Africa, the Caribbean and to diverse locations within the Indian subcontinent. After independence also the trend of outmigration continues in search of better education and employment opportunities. In the recent decades the most favored destinations of Indian migrants have been the Gulf countries, North America and Europe. At the same time India has also witnessing in migration of large number of people from neighboring countries. Apart from the international migration, India is constantly facing the problem of inter-state migration and rural-urban migration. Youths of rural areas have been migrating to urban areas in search of higher education and better employment opportunities. According to the 2001 census data, 30.39% of total population in India were migrants i.e., settled in other places other than their original residence. This figure rose to 37% in the 2011 census.

  - **Migration from other Countries:** During the period 1901-30 more Indians went outside the country than those who migrated to India. In the period 1901-05, the number of emigration was 14.28 lakhs against 9.57 lakhs of return migrants. The figure moved up to 32.98 lakhs in 1926 and 28.57 lakhs in 1930. The 1951 census data showed that among the people who were residing in India 87 lakhs were born outside the country. The number of such migrants moved up to one crore in 1961 census. Most of those who migrated to India were from Nepal, followed by Pakistan and Britain. According to 1971 census the break-up of the migrants from different countries were—0.4% from Afghanistan, 0.98 % from Burma, 0.50% from Sri Lanka, 11.3% from China, 45.87% from Nepal, 30.57% from Pakistan, 10.31% from USSR, 4.87% from U.K., 0.15% from

Canada, 1.23% from the U.S.A., 0.87% from Africa and remaining 12.77% were from other countries of the world. The census data revealed that in 1991 the number of migrants to India from other countries was 69 lakhs which went down to 61 lakhs in 2001. India's net migration rate was negative in 2011 with -0.33% (-33.4 lakhs) and it again began positive with 0.09% (7.4 lakhs) in 2001. It shows that more Indians are migrating outside than the number of people coming to India. Now, India is the top source of international migrants. In 2015, 1.56 crore people born in India lived in other countries. In the same year 52 lakhs immigrants lived in India, among whom majority (32 lakhs) were from Bangladesh.

- **Inter-state migration:** The census data also reveals the figures of people who continue to migrate from one state to another. In 1901, the percentage of people who migrated to other states to the total population of the country was 3.3%. It slightly rose to 3.6% and 3.7% in 1911 and 1921 respectively. But the figure again came down to 3.6% in 1931, 3.1% in 1951, and 3.3% in 1961 and to 3.2% in 1971. Some of the states from where people usually go out were U.P., Bihar, Rajasthan, Punjab and Andhra Pradesh. The receiving states of those migrants were Maharashtra, Bengal, Assam and Karnataka. In 1991 the percentage of inter-state migrants to the total population was 3.24. The ratio became 4.11 % in 2001.
- **Rural-urban migration:** In India, there is rapid migration from rural areas to urban areas. The economic stagnation in rural areas forces the people to migrate to towns or cities in search of employment opportunities, better health and education for children. During the period 1941-51, about 17% of the total urban population came from villages. The figure for the period 1951-61 was 8.4%. As per the census report 2011 the rural-urban migration moved to 56% which was 42% in 2001.

9.4 COMPOSITION OF INDIAN POPULATION

Composition of population describes the **characteristics of a group of people in terms of factors** such as their age, sex, marital status, education, religious status, ethnic and racial composition and relationship to the head of household. In this section, we will discuss about the age structure, sex structure, religious status and ethnic and racial composition of Indian population.

9.4.1 Age Structure

- **Nature of Age Data:** The United Nation has defined age as "the estimated or calculated interval of time between the date of birth and the date of census, expressed in completed solar years." It has also recommended that information on age should be collected in the census by asking the date of birth of the individual (day, month and year) or by asking direct questions to get information on the age at the last birthday, or by applying both the methods together. Although the first attempt helps to collect more accurate information about age, it is not always possible to get date of birth from a population where the majority is illiterate or semi-literate. In such a situation, information about age is gathered by asking about "the age completed on the last birthday."

  Sometimes it becomes very difficult to obtain correct information about age when people are illiterate or semi-literate and are ignorant about their own age. In India, for enumerators or investigators in a census or demographic survey, the collection of information about age becomes difficult when it comes to ignorant and illiterate people. Moreover, the practice of registering births is not yet followed widely in India and therefore, birth certificates are not available with them. There is a great deal of apathy on the matter of accurate age because Indians do not always have to face situations where

they have to produce proof of age. Therefore, the Indian age data show concentration of population at a certain age, for Indians prefer to report their age in numbers ending with 0 or 5. But due to deliberate wrong statement and misunderstanding about questions and carelessness in reckoning age, errors in age reporting have been observed.

- **Analysis of the Age Structure:** Age data are usually available in the form of single years, that is the number of persons in the population of age 13, 14, 15, etc. But for demographic analysis, age data are used in different form. It is customary to classify them in five-year age groups, such as 0-4, 5-9, 10-14, 15-19, 20-24 and so on. The age data thus classified into mutually exclusive age groups are used for age structure analysis of any population.

  The age structure of any population is generally studied with the help of a simple mathematical measure such as percent distribution and the age pyramid. The other measures used to analyze the age structure are the average age (mean, median, mode, etc). Moreover, other indices based on the distribution of population of various age groups are also used to analyze age structure of a given population. Among all these, the simplest measure is the percentage distribution of the population based on the absolute numbers in various five- year age groups that indicate the number of persons in an age group if the total number of persons in the age group considered is 100. This measure is also helpful in forming an idea about the age structure of any population and is used for analyzing it.

- **Effects of Fertility and Mortality:** Until 1950 demographers did not understand well enough the effects of changes in fertility and mortality on the age structure. Fertility measure is the rate at which population adds to itself by births. This measurement may be related to something like the total population of women in the country or the region. Human

fertility is responsible for biological replacement and for maintenance of the human society. Any society replenishes itself through the process of human fertility. The size of births in a country depends on many factors, for example, relative position of child bearing females and males, marriage behavior, attitude towards children, outside marriage, conception control practices and attitudes, certain social and biological characteristics of population, political and religious attitudes and the state of medical facilities. Even though birth rate is a biological process, it also includes a social component. The number of children is mainly determined by the social environment in which they live. No aspect of human behavior is more regulated by cultural perception, more subjected to idealization, more conditioned by the process of socialization and subject to inhibition of animal drive by human personality. High fertility societies are often the result of the accumulation of a large number of individual decisions to have children who are treated as a form of insurance of their parents for their old age or for a variety of risks, such as a drought or a poor harvest. India which is dominated by the Hindus in terms of population carries the deep cultural significance of having sons. Contrary to the high fertility societies, the low fertility societies are affected by changing overall social environment wherein wealth, prestige, status, education and other related causes often help to lower fertility through the change in attitude of the people. Declining mortality is the root cause of current world population because, if the mortality rate is high, fertility is bound to be higher because after the death of a child, family will like to add one more, so that there should be surviving children in the family. The United Nations and World Health Organization have defined death as follows, “death is the permanent disappearance of all evidence of life at any time after birth has taken place and the death can only occur

after a live birth." Fertility is the most crucial variable among the two variables to affect population growth—the other one being mortality. Fertility rates in India are quite high in comparison with those of the US or of Western Europe. But they are lower than rates in other developing countries such as Pakistan and the Latin American countries. High birth rate is due to two reasons: i) Socio-economic conditions, and ii) if the rate of national income is too slow so as to influence the transformation of pattern of births. In the last 50 years, the birth rate has been falling. Even in the crucial decade of 1921-31, the birth rate reduced by two points only. The main aspect of birth rate is its dependence on objective factors such as socio-economic reproduction.

9.4.2 Sex Structure

Sex and age are the basic characteristics or the biological attributes of any demographic group. Sex is an easily identifiable attribute of demography. For the study of the sex-structure of any population, the following two measures are generally adopted:

- The percentage of males in the population or masculinity proportion
- The sex ratio of these two measures, the latter is more frequently used in the study of population.

The sex ratio of a population may either be calculated as the number of males per 100 females or as the number of females per hundred males. The Indian census has preferred to follow the latter definition. When the sex ratio is defined as the number of males per 100 females, the sex ratio above 100 indicates a high sex ratio, while that below 100 is considered to be a low sex ratio. According to the 1991 Census of India, the overall sex ratio of the total population was 107.9, that means there were 107.9 males for every 100 females in India in 1991. The following table will reflect the overall sex ratio in India from 1901-2001:

Table 9.6: Overall Sex Ratio in India 1901-2001

Sex Ratio = (M ÷ F) x 100

Census Year	Sex Ratio
1901	102.9
1911	103.8
1921	104.7
1931	105.3
1941	105.8
1951	105.7
1961	106.3
1971	107.5
1981	107.1
1991	107.9
2001	107.2

Sources: 1. 1901-1971 computed from Census Centenary 1972, Pocket book of Population Statistics, pp. 18-19. 2. Computed from Registrar General and Census commissioner of India, Census of India 1981, Provisional population Totals, Series 1, India Paper 1 of 1981. 3. Computed from Registrar general and Census Commissioner of India, Census of India, 1991, Provisional Population totals, series I, India Paper 1 of 1991.4. Computed from registrar general and Census.

Here the table indicates that the sex ratio in the country has always remained unfavorable to females and the sex ratio which was 102.9 in 1901 has increased to 107.2 in 2001 showing more and more preponderance of males in the population.

During 1961-71 there was a sharp increase in the sex ratio from 106.3 males per 100 females to 107.5 males per 100 females. After 1971, the sex ratio has fluctuated from 107.1 to 107.9. During 1991-2001 there is slight improvement in the sex ratio from 107.9 males per 100 females to 107.2 females per 100 females.

The sex ratio in India which is increasingly becoming unfavorable to females since the past three censuses has been a matter of great concern for the Indian Demographers.

- **Factors affecting the overall sex ratio:** While the sex-age structure of any population is determined by past trends in fertility, mortality and migration, the overall sex ratio is the result of the effect of the following three factors:
  - The sex ratio of new born babies or the sex ratio at birth.
  - The sex ratio of deceased persons
  - The sex ratio of net migrants
  - **Sex Ratio at Birth:** It is a fact that there is no 1:1 correspondence in the male and female births; the number of male babies is always slightly higher. Sex ratio at birth is determined biologically, and therefore, only slight variations are observed from population to population. It appears that nature's balance is slightly more favorable to males at birth. The sex ratio at birth depends upon the sex ratios of two biological antecedent events: i) sex ratio at the time of conception ii) sex ratio of fetal losses or deaths. The sex of the fetus is determined at the time of fertilization; but there is no direct means of observing this ratio at conception. Many researchers have attempted to estimate it indirectly on the basis of the sex ratio of fetal deaths. They have arrived at the conclusion that the sex ratio at conception, known as the primary sex ratio, is much higher than the sex ratio of live births or fetal deaths. An examination of these ratios of stillbirths shows that there are a comparatively higher proportion of male babies among stillborn babies.

    Though the sex ratio at birth is determined primarily by biological factors, variations (though only of small magnitude) are caused due to some demographic factors such as the age of mothers and the order of live births. It is observed that there is an inverse relationship between the age of the mother and the

birth order of the child on the one hand and the sex ratio at birth on the other. Due to the advanced technology, in countries like India, where preference for sons has persisted for a long time, determining the sex of the fetus and sex selective abortions have become common. In India, a very large number of couples practice induced abortion of the female fetus and hence, the sex ratio at birth has become increasingly favorable to male babies. Thus the socio-cultural factor of 'son preference', with the help of modern techniques, can also influence the sex ratio at birth.

- **Sex Ratio of Deceased Persons:** Differential mortality of males and females is an important factor affecting the overall sex ratio and the sex ratio at various ages. Compared to the sex ratio of births, that of deceased persons shows greater variation from country to country. Data on dead sex ratios in various countries indicate that, with the exception of India, Pakistan and Bangladesh, the values of the sex ratios of the deceased are much above 100. In other words, more than 100 males die per 100 females. The male fetus is biologically more delicate than the female fetus and is, therefore, at a disadvantage, with the result that there is a higher proportion of stillborn male babies. Even after birth, the male baby continues to be biologically disadvantaged. This fact is reflected in the higher male mortality rates not only on the first day, in the first week, the first month or the first year, but throughout life. In fact, in most countries, the crude death rates for males are higher than those for females.

  It has also been observed that the expectation of life at birth for females is almost universally higher than that for males, including India. In India, female life expectancy was lower than male life expectancy until

recently. In developed countries, at each age, the death rates are usually higher for males than for females. Though the same pattern has not been observed in developing countries, the over-all mortality for males is generally higher for females.

- **Sex Ratio of Net Migrants:** The third factor affecting the overall sex ratio of any population is the sex ratio of the net migrants, which is essentially socio-economic in nature. Migration is ordinarily sex-selective, in the sense that persons of either sex participate in migration rather than persons of both sexes participate equally. In most countries, the volume of international migration is not significant enough to have any marked impact on the sex structure of the population.

  Internal migration is also sex-selective, but more so in the case of males. When persons of one sex dominate among internal migrants, the sex ratios of the various regions of the country are affected. For example, it is observed that, in India, among the migrants who go from rural to urban areas, the proportion of males is high. As a result, the sex ratio of the urban population in India has always been higher (111.9 in 1991 and 111.0 in 2001) than that of the rural population (106.6 in 1991 and 105.7 in 2001). Indian cities have unusually high sex ratios. The sex ratios of some important Indian cities having more than one million population in 1991 are presented in the table below.

Table 9.7: Sex Ratios of Populations in Indian Cities with One Million or More Population in 1971 and 1981

Sex Ratio= (M ÷ F) x 100

City	1971	1981	1991	2001
Calcutta Urban Agglomeration	142.6	127.7	120.87	120.8
Greater Bombay	139.6	129.4	120.69	123.3

Delhi Urban Agglomeration	125.3	123.7	107.86	121.2
Madras Urban Agglomeration	110.7	107.5	108.23	105.2
Hyderabad Urban Agglomeration	109.1	108.7	112.39	105.8
Ahmadabad Urban Agglomeration	120.5	115.3	110.80	112.9
Bangalore Urban Agglomeration	114.4	111.9	119.52	109.2
Kanpur Urban Agglomeration	131.2	123.5	110.55	115.0
Pune Urban Agglomeration	116.2	113.6	110.55	109.2

Source: Computed from Census of India, 1971, Series I, India, Part IIA (i) General Population Tables, pp. 241-250, Census of India 1981, Provisional Population Tables, Rural- Urban Distribution, p.65. Computed from Census of India 2001, Series 2. Provisional Population Totals, Paper 1 off 2001, India.

This table indicates that the value of sex-ratio of each city has gone down considerably compared to 1971. This suggests that over a period of 30 years, the number of females among migrants has increased. In India, the sex ratio in urban areas is favorable to males.

9.4.3 Religious Structure

Since religion influences various types of demographic behavior, therefore it plays a very important role among the various social characteristics of a population. While sociologists study religion from various angles, demographers treat it as a variable when studying marriage, fertility, mortality, migration, etc. Societal customs and practices regarding marriage are greatly influenced by religion and hence, it becomes necessary to study age at marriage and dissolution of marriage, the practice of widow remarriage, the prevalence of polygamy, etc. in relation to religious affiliations.

An understanding of these practices regarding marriage is important in the study of fertility because societal fertility is affected by them. The acceptance of family planning, the status of women and religion are all inter-related. For the study of mortality too, it is necessary to know the religious affiliations of the groups that are studied, for the diet of a population and their customs and practices

of personal and social hygiene are greatly influenced by religion. Even migration, internal as well as international, is greatly influenced by religion. The variable 'religion' thus has occupied an important position in demographic analysis.

As some difficulties are experienced at the time of collecting and classifying information on the religious affiliations of a population at the international level, this type of demographic analysis is undertaken only at national levels.

In the societal structure, India occupies an important position, and therefore, information on religion has been collected since the inception of census operations. Prior to independence greater emphasis was placed on this variable and data on religious affiliation were cross-classified with other variables, such as age, sex, marital status, literacy, rural- urban residence etc. The earlier census reports contain a detailed discussion on various religious groups in India. The differential growth of these groups and an analysis of the reasons for such differential growth were undertaken by census scholars. However, since independence, the emphasis of the analysis has shifted to economic aspects of population.

A demographic analysis of religion is usually undertaken by describing the percentage distribution of the people in various religious groups. This type of analysis is done by sex and by rural-urban residence for various states and Union Territories right up to the district level.

9.4.4 Ethnic and Racial Composition

India's present day demography is a conglomeration of people belonging to different racial groups with different ethnic backgrounds. People entered India from different regions at different point of time. India has been a meeting point of different races and tribes from time immemorial. Various races are found in India. Consequently, India has a varied population and diversified ethnic composition. On the other hand, the present population of India is

divided broadly into several racial groups. Such as-

- **The Negritos**: Perhaps they were the first of the racial groups that came to India. They got settled in the hilly areas of Kerala and the Andaman Islands. Kadar, Irula and Puliyan tribes of Kerala resemble the Negritos to a great extent. They are related to Africa, Australia and their neighboring islands. The Negritos have black (dark) skin, woolly hair, broad and flat nose and slightly protruded jaws.
- **The Proto-Australoids**: The people belonging to the Proto-Australoid race came here just after the Negritos. Their sources are Australian aborigines. They are settled in the central India from the Rajmahal hills to the Aravalis. Santhal, Bhil, Gond, Munda, Oraon, etc. are tribes are related to this group. They are physically different from the Negritos in many ways, for example, their hair is coarse and straight instead of being woolly. It is considered that they were the people who, in collaboration with Mediterranean race, had developed the Indus Valley Civilization.
- **The Mongoloids**: The original homeland of this race was Mongolia (China). The Mongoloids came to India through the passes of northern and eastern mountain ranges. These people are concentrated in the nearby areas of the Himalayas such as Ladakh, Sikkim, Arunachal Pradesh and other areas of the north-eastern India. The Mongoloids have pale or light pale skin, short height, comparatively large head, half open eyes, flat face and broad nose. In India, they can be divided into two branches-
  - **Paleo-Mongoloids**: They were the first of the Mongoloids who came to India. These people are settled mainly in the border areas of the Himalayas. They are found mostly in Assam and the adjacent states.
  - **Tibeto-Mongoloids**: These people came from Tibet and are settled mainly in Bhutan, Sikkim, areas of north-

western Himalayas and beyond the Himalayas in which Ladakh and Baltistan are included.

- **The Mediterraneans**: They came to India from the south-west Asia. They may be divided into three groups-
  - **Paleo-Mediterraneans**: They were the first of the Mediterranean race that came to India. They were of medium height, black skin, well- built body and long head. Perhaps they were the people who had begun cultivation for the first time in the north-west India. The group which came later pushed them towards central and south India.
  - **Mediterraneans**: They came to India later on. They developed the Indus valley civilization in collaboration with the Proto-Australoids and initiated the bronze culture for the first time during 2500-1500 BC. Later on, the new invading group coming from north-west pushed them from the Indus valley to the Ganga valley and towards the south of the Vindhyas. Today, most of the population of lower castes in the north India belongs to this race.
  - **Oriental-Mediterranean**: They came to India very late. They are populated mostly in the north-western border areas of Pakistan and Punjab. They are also found in sufficient number in Sindh (Pakistan), Rajasthan and western Uttar Pradesh.
- **The Brachycephalics (Western race with broad head):** Apart from Mongoloid, some other races found in India having broad head are: Alpinoids, Dinarics, Armenoids
- **The Nordics:** They are the last of the racial groups that came to India. They came from Taiga and Baltic regions. They were Aryan speaking families with long head, fair complexion, sharp nose and well-developed and well-built body. They are found in the region of Punjab, Haryana, Rajasthan and Jammu.

The Indo-Aryan people are part of the various Indo-European ethno-linguistic groups who speak one of the many Indo-Aryan languages. It is estimated that the Indo-Aryans first migrated to the Indian subcontinent of South Asia around 1800 BCE. Indo-Aryans make up the majority of the Indian population and are mostly located in north and central India.

The Indo-Aryans are the most diverse group of people in India, being made up of Assamese, Bengali, Gujarati, Hindi, Kashmiri, Konkani, Marathi and Punjabi.

The Dravidian people are any of the native speakers of the Dravidian languages in the Indian Subcontinent of South Asia. Almost all the Dravidians of India live in the south of India. The five major ethnic groups of Dravidian people in India are Kannadiga, Malayali, Tulu, Tamil, and Telugu. The ancient Indus Valley civilization in India was believed to have been of Dravidian origin in northern India, but then the Dravidian people were pushed south when the Indo-Aryans came in and the Kuru Kingdom in northern Indian arose. Later south India was dominated by the three Dravidian kingdoms of the Cheras, Cholas, and the Pandyas. The major languages spoken by the group of people to arrive in India was the Austrics who were the group that paved the way for the modern foundation for Indian civilization. They were the first in India to have cultivated vegetables and rice, as well as made sugar. There are very few Austrics found in India now, but their languages still can be found in Eastern and Central India. The Mongoloids are found in the various states in the northeastern part of India, as well as in the northern areas in the states of Ladakh, parts of West Bengal, and Sikkim. The last minority group in India are the Western Brachycephals who mostly live in the western part of India is areas like Kashmir, Gujarat, Tamil Nadu and Maharashtra.



CHECK YOUR PROGRESS

Q 1: What is the UN definition of Age? (Answer in about 20 words)

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Q 2: Who are the Brachycephalic people? (Answer in about 30 words)

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Q 3: What are the factors affecting the overall sex ratio? (Answer in about 30 words)

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9.5 OCCUPATIONAL STRUCTURE OF INDIAN POPULATION

Occupational structure basically refers to the distribution of of working population among the different sectors in the economy. The total production of a country is basically comprised of three major sectors viz. primary sector, secondary sector and tertiary sector. And based on it occupations are generally classified as primary, secondary, and tertiary. We will discuss in details about the occupational structure of Indian population in Unit 13 under the section **13.3.2 Occupational structure of Population.**

9.6 CHANGING CHARACTERISTICS OF INDIAN POPULATION

As per Census, the population of India grew by 17.64 percent from 102.86 crore in 2001 to 121.08 crore in 2011. To understand the changing nature and characteristics of India population we have to understand the

changing demographic characteristic of the country, which are discussed as follows-

- **Changes in rural-urban composition:** The total population of India can be divided into-rural and urban on the basis of the size and occupation of settlements. Post-independence, first time population of urban area is showing absolute increase compare to rural areas. The rural population is 68.84 percent and Urban population is 31.16 percent in 2011. The proportion of urban population has been increasing from 10.8 % in 1901 to 31.16 percent in 2011. The steady growth in urban population is not a natural increase in population, but the growth is due to high rate of migration from rural to urban areas. There is also decline of rural population from 72.19 percent in 2001 to 68.84 percent in 2011.

Table 9.8: Rural-Urban Composition

Population (in Crore)	2001	2011	Difference
India	102.9	121.0	8.1
Rural	74.3	83.3	9.0
Urban	28.6	37.7	9.1

Source: Office of the Registrar General, India

- **Changes in religious composition:** Indian society is divided into seven major religious communities- Hinduism, Islam, Christianity, Jainism, Buddhism, Sikhism and Zoroastrians. Hindus are the largest religious community in India. According to 2011 Census, Hindus constituted 96.63 crores (79.8 per cent), Muslims 17.22 crores (14.2 per cent), Christians 2.78 crores (2.3 per cent), Sikhs 2.08 crores (1.7 per cent), Buddhists 0.84 crore (0.7 per cent), Jains 0.45 crore (0.4 per cent), other religions & persuasions (ORP) 0.79 crore (0.7 per cent) and religion not stated 0.29 crore (0.2 per cent). Proportion of the Jainism and Christianity population has declined by 0.04 percent during the decade (2001-11), Buddhism population by 0.07 percent point, Sikhism population by 0.15 percent and Hinduism population by 0.66 percent.

Table 9.9: Population trends for major religious groups in India (2001–2011)

Religious group	2001	2011	Difference
Hinduism	80.46%	79.80%	-0.66%
Islam	13.43%	14.23%	0.80%
Christianity	2.34%	2.30%	-0.04%
Sikhism	1.87%	1.72%	-0.15%
Buddhism	0.77%	0.70%	-0.07%
Jainism	0.41%	0.37%	-0.04%
Others	0.06%	0.66%	0. 60%
Religion not specified	0.72%	0.90%	0.18%

Source: Office of the Registrar General, India

- **Changes in Gender Composition:** As per Census of India 2011, for one thousand males there are only 943 females. The gender composition in India is unfavourable. This also means that there are more number of males compared to the number of females. Gender composition or sex ratio is also the indicator of women's status in the society. Most of the 20th century, the sex ratio among Indian population had declined but recently there are some trends of upward movement. As per Census, the sex ratio in 1991 was 927, 2001 was 933, and in 2011 was 943. Urban India had experienced improvement in sex ratio compared to rural India but the urban child sex ratio is worse than the rural India.

Table 9.10: Gender Composition

Overall	2001	2011	Difference
India	933	943	+7
Rural	946	947	+1
Urban	900	926	+26
0-6 Years			
India	927	914	-13
Rural	934	919	-15
Urban	906	902	-4

Source: Office of the Registrar General, India

- **Changes in age composition:** As per the Census of India 2001, children up to 14 years of age account for 35.3% of the total

population. The age group of 15-59 years accounts for 56.9% of total population and the age group of 60 years and above for 7.4% of population. The age structure has been undergoing some gradual changes during the recent decades. One of the trends is that proportion of the younger population i.e. in the age group of 0-14 years is declining and the percentage of persons on the working age group, i.e. 15 to 59 age group as well as old age population i.e. 60 years and above are increasing. But in 2001 Census, the percentage of persons in the age group of 15-59 declined from 57.7% in 1991 to 56.9% in 2001 Census. However, the proportion of people in old age group has increased from 6.6% in 1991 to 7.4% in 2001 Census. The proportion of young population i.e. 0-14 years declined from 36.5% in 1991 to 35.3% in 2001 Census.

India is currently experiencing the demographic dividend. Demographic dividend is the phenomenon which tends to occur when the share of its working population is larger than the share of its non-working population. To take the advantage of demographic dividend, India needs to focus on economic development and better living standards.

Table 9.11: Percentage share of different age groups: 2001-2011

Age group	2001	2011	Difference
All ages	100	100	
0-4	10.74	9.32	-1.42
05-09	12.47	10.48	-1.99
10-14	12.14	10.96	-1.18
15-59	56.93	60.29	3.36
60-99	7.44	8.53	1.09
100+	0.01	0.05	0.04
Age not stated	0.27	0.37	0.1

Source: Office of the Registrar General, India

- **Changes in literacy composition:** The average literacy rate in India as per census 2001 was 65.38 percent and as per census 2011 was 74.04 percent. The present data clearly indicates that the literacy rates continued to improve. Quite importantly, we can see improvement in

female literacy is more than males in both rural and urban areas. The gender gap among male and female in literacy has come down from 24.6 in 2001 census to 19.8 in 2011 census in rural areas and from 13.4 in 2001 census to 9.8 in 2011 census in urban areas.

Table 9.12: Literacy Rate (in %)

	2001	2011	Difference
Male			
India	75.3	82.1	+6.8
Rural	70.7	78.6	+7.9
Urban	86.3	89.7	+3.4
Females			
India	53.7	65.5	+11.8
Rural	46.1	58.8	+12.7
Urban	72.9	79.9	+7.0

Source: Office of the Registrar General, India

- **Changes in Life Expectancy:** As per census 2011, Indian life expectancy is estimated to be 66 years. Compared to some other countries such as Japan (83 Years), England and America (79 Years), we are lagging behind. Compared to most countries of the world, birth and death rates in India are high.

Table 9.13: Life Expectancy

	2001	2011	Difference
Male	61.4	63.8	2.4
Female	63.6	67.3	4.3
All	62.5	65.5	3.0
World Ranking All	126	137	

Source: Office of the Registrar General, India

- **Changes in demographic transition pattern:** India is in the third stage of the demographic transition 'low birth rate- low death rate' over the last two decades after crossing the first stage ('high birth rate- high death rate') and second stage ('high birth rate- low death rate') of the demographic transition pattern. The Crude Birth Rate (CBR) of the country has declined from 33.9 per thousand persons in 1981 to 23.5 per thousand persons in 2006.Similarly, the Crude

Death Rate (CDR) of the country has declined from 12.5 per thousand persons in 1981 to 7.5 per thousand persons in 2006.The CDR in India is continuously falling due to the decline of Infant Mortality Rate (IMR).The IMR of the country was 146 per thousand in 1991, which has come down to 57 in 2006.

- **Changes in gender disparities:** The gender- based disparities in the country have declined as shown by the key indicators of gender disparities viz. Gender Development Index(GDI) and Gender Empowerment Index(GEI).The estimated scores of GDI for India were 0.514 in 1996 and 0.590 in 2006, indicating an increase of 0.076 points. While the estimated scores of GEI for India were 0.416 in 1996 and 0.497 in 2006,indicating an increase of 0.081 points. scores of GEI for India were 0.416 in 1996 and 0.497 in 2006,indicating an increase of 0.081 points.



CHECK YOUR PROGRESS

Q 4: What is meant by occupational structure of an economy? (Answer in about 50 words)

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Q 5: Mention the key indicators of key indicators of gender disparities. (Answer in about 20 words)

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Q 6: India is in what stage of demographic transition?

.....



9.7 LET US SUM UP

- Age is the estimated or calculated interval of time between the death of birth and the date of census, expressed in completed solar years.

- Whether a population of any country is 'young' or 'old' is mainly determined by the fertility of the women in that country.
- Sex and age are the basic characteristics or the biological attributes of any demographic group.
- Ethnicity is considered to be shared characteristics such as culture, language, religion and traditions which contribute to a person or group's identity.



9.8 FURTHER READING

1) Asha A. Bhende and Kanitkar, T. (2010). *Principles of Population Studies.* Mumbai: Himalaya Publishing House Pvt. Ltd.
2) Ashraf, D. N. Major Determinants of population growth. *International Journal of Human Resource & Industrial Research, 3* (4).
3) Margaret L. Anderson, Howard F. Taylor. (2015). *Understanding Sociology.* New Delhi: Cengage.
4) Rao, C. S. (2009). *Sociology.* New Delhi: S. Chand.



9.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: The United Nation has defined age as "the estimated or calculated interval of time between the date of birth and the date of census, expressed in completed solar years."

Ans to Q No 2: The Brachycephalic people were the first to arrive in India, having travelled all the way from Africa. In modern mainland India, only small groups of the Brachycephalic peoples like the Irulas, Kodars, Paniyans, and Kurumbas live in small areas in southern India in hill tribes.

Ans to Q No 3: The overall sex ratio is the result of the joint effect of the following three factors:

- The sex ratio of new born babies or the sex ratio at birth.
- The sex ratio of deceased persons

- The sex ratio of net migrants

Ans to Q No 4: Occupational structure basically refers to the distribution of of working population among the different sectors in the economy. The total production of a country is basically comprised of three major sectors viz. primary sector, secondary sector and tertiary sector. And based on it occupations are generally classified as primary, secondary, and tertiary.

Ans to Q No 5: The key indicators of gender disparities are Gender Development Index(GDI) and Gender Empowerment Index(GEI).

Ans to Q No 6: India is in the third stage of the demographic transition 'low birth rate- low death rate' over the last two decades.



9.10 MODEL QUESTIONS

Short Questions (Answer each Question in about 150 words)

Q 1: Define primary sex ratio.

Q 2: How can age composition affect the population structure?

Q 3: Define ethnicity.

Q 4: Briefly explain the occupational structure of Indian population.

Long Questions (Answer each Question in about 300-500 words)

Q 1: Discuss how sex composition affects the population structure. Elucidate India's population structure in this regard.

Q 2: Analyze religious structure of a population elucidating India's population structure.

Q 3: Explain the ethnic and racial structure of India.

Q 4: Discuss the trend in Indian population growth.

Q 5: Explain the composition of Indian population.

Q 6: Explain the changing characteristics of Indian population.

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UNIT 10 : POPULATION POLICIES IN INDIA

UNIT STRUCTURE

10.1 Learning Objectives

10.2 Introduction

10.3 Population Policies

- 10.3.1 Concept of a Population Policy
- 10.3.2 Need for State Intervention in Population Control

10.4 Population Programme

- 10.4.1 National Population Policy

10.5 Initiatives and Their Critique

- 10.5.1 Decentralised Planning and Programme Implementation
- 10.5.2 Convergence of Service Delivery at Village Levels
- 10.5.3 Empowering Women for Improved Health and Nutrition
- 10.5.4 Meeting the Unmet Needs for Family Welfare Services

10.6 Let Us Sum Up

10.7 Further Reading

10.8 Answers to Check Your Progress

10.9 Model Questions

10.1 LEARNING OBJECTIVES

After going through this unit, you will be able to –

- explain the population policies
- describe the various programmes related to population
- describe the initiatives taken by government of India to control the population.

10.2 INTRODUCTION

Population policy may be defined as deliberately constructed or

modified institutional arrangements and/or specific programs through which governments influence, directly or indirectly, demographic change. In simpler terms, population policy is a strategy for achieving a particular pattern of demographic change. The change could be both quantitative as well as qualitative. Policies can broadly group those for under developed countries and other for developing countries. Since the 1950's, the population policy in the developing world has become essentially synonymous with family planning programs. Financial and administrative limitations within developing countries necessitated the heavy involvement of foreign assistance in launching and sustaining family planning programs. Declared demand for birth control does not necessarily translate into effective willingness to practice it: conflicting desires may interfere. Weakness of measures of latent demand, or "unmet need," is reflected in the requirements that programmes are supposed to satisfy if they are to be successful. These, typically, included such items as doorstep accessibility of quality services, broad choice of contraceptive methods, forceful IEC [information, education, and communication] programs, sound financing strategies, sound management with proper logistics, evaluation systems, a continuous process of strategic thinking, planning and management, and staff leadership for program parameters. The effectiveness of family planning programs in reducing fertility remains a matter of controversy.

10.3 POPULATION POLICIES

The population policy of a nation can no longer confine itself to the reduction of birth rate alone; instead, it must be all encompassing and comprehensive strategy for overall improvement of social, economic and demographic fabric of a nation. There are two distinct approaches to the family welfare and planning programmes. ***One,*** advocating long-term measures with a view to improving overall social, economic and demographic structure of a country, and ***two,*** short-term measures with a view to reaping immediate results by way of averting the number of births.

The long-term measures include: promoting well-conceived population education, increasing the marriage-age, preventing child labour, compulsory education and adult literacy campaigns, restricting the maternity benefits to small families, providing old-age security, introduction of new life insurance policies carrying special benefits for the small families, developing intense network of small scale industries based upon agro-livestock raw material, utilising scheduled castes and schedule tribes manpower, diversifying economy by way of rapid urban industrial development, and better health, and enhancing education and employment facilities in general and for females in particular. On the other hand, short-term measures include: temporary and permanent methods of preventing child birth such as contraception, voluntary sterilisation, compulsory abortion after the birth of second and third child in the family, and social and economic benefits for small families and penalties for large families. All such measures need people's approval and participation.

During the 1991 Census, it was observed that there is a clear cut demographic divide between Northern BIMARU (BI stands for undivided Bihar, MA stands for undivided Madhya Pradesh, R stands for Rajasthan and U stands for undivided Uttar Pradesh) States in comparison to southern states of Kerala and Tamil Nadu. Major factors responsible for this are differences in literacy, particularly female literacy, and health care facilities. Accordingly, the development rationale of family planning programs was gradually dropped and was replaced by the argument that the programs satisfy important health needs and help people exercise a fundamental human right.

10.3.1 Concept of a Population Policy

The size of the population, its characteristics, spatial and rural-urban distribution, rate of growth and its determinants decide the quantum, pattern and distribution of consumption and production. It is, therefore, only natural for the state or the government to be concerned about population. Such concern is most essential for a complex democratic society seeking to eradicate poverty and ensure

adequate standards of living for its people. Of course, even an authoritarian leader must consider the actual or potential supply of workers (including army personnel), the requisite equipment and the consumption needs of people. A policy is defined as a statement of important goals, accompanied by a specified set of means to achieve them. A well-elaborated set of means constitutes a programme. A good policy has to be based on a sound theory linking the means with the ends, although on social issues it is often likely to involve an element of judgement about the connection between inputs and outcomes or the process. The choice between alternative policies has to be made not just in terms of their prospective contribution to the achievement of goals but also their legitimacy, cost, potential popularity and, among other things, effect on other goals. Given the large number of variables that are influenced by and that influence population trends, there is a temptation to make it into a comprehensive development plan. Population policy could easily be drowned in an elaborate framework. However, a flexible, broad framework is certainly imperative.

10.3.2 Need for State Intervention in Population Control

In 1952, India was the first country in the world to launch a national programme, emphasizing family planning to the extent necessary for reducing birth rates “to stabilize the population at a level consistent with the requirement of national economy”. After 1952, sharp declines in death rates were, however, not accompanied by a similar drop in birth rates. The National Health Policy, 1983 stated that replacement levels of total fertility rate (TFR) should be achieved by the year 2000. Currently, Indian population is second only to China. The comparison with China, however, is misleading since China has about 20% of the world population and 7% of total land area. In contrast, India has about 16% of the world population but has only about 2.4% of the total land area. Population and reproductive health facts of India, recently

released by the United Nations Population Fund states that 'the country was not a role model in terms of population control'. The Report also comes down heavily on sex ratios which are among the 'worst in the world.' The adverse ratio of 960 females to 1000 males is due to 'sex preference for sons' and prevalent practices of female foeticide and infanticide.

10.4 POPULATION PROGRAMME

Population policy began with the beginning of five year plans. Although India was the first developing country to adopt a positive population policy in 1951-52 'to stabilise population at a level the national economy could absorb', yet its achievements in controlling its numbers have been far from satisfactory. A brief review of population policy since the beginning of the planning era is presented below**:**

- **The First Five Year Plan (1951 -56)** enunciated that the programme for family limitation and population control should:
  - Present an accurate picture of the factors contributing to the rapid population increase in India;
  - Discover suitable techniques of family planning and devise methods by which population control measures: Individual, knowledge of these techniques could be widely disseminated.
  - Give national and international advice on family planning as an integral part of the service of government hospitals and public agencies, with the focus in the beginning remained on promoting the safe period method and a gradual popularisation of mechanical and chemical contraceptives.
- The population policy of the First Plan continued unaltered during **the Second Five Year Plan (1956-61)** except that the voluntary sterilization scheme was introduced in 1956. The Second Five Year Plan recognised that the rate of economic development would depend upon:
  - The rate of growth of the population
  - The proportion of current income of the community devoted to capital formation.

- The return by way of additional out put on the investment thus undertaken.
- The planning commission was aware of the possible constraints on the impact of family planning during this period and was apprehensive of future economic growth.

- Due to unexpected high population growth rate in 1961 Census, the 'clinical approach' of the population policy was replaced by an 'extension education approach' during the **Third Plan (1961-66)**. There were no changes during 1966-69 when there were only annual plans, due to delay in formulation of the fourth five-year plan.
- The population policy became more posit during the **Fourth Five Year Plan (1969-74).** The plan also set up a time-bound target of reducing the birth rate from 39 per thousand to 23 per thousand by 1978-79. This plan achieved the target of the sterilisation of about 61 million couples, averting about 6.9 million births.
- **The Fifth Five Year Plan (1974-79)** introduced basic change in the population policy by integrating family planning services with welfare services covered 'under the minimum needs programme. The programme sought to integrate most of the basic social services like education and public health services with family planning and nutrition for children and expectant and nursing mothers.
- During the **Sixth Five Year Plan (1980-85)** the family welfare continued to be accorded a high priority. The plan adopted a strategy to integrate health, family welfare and nutrition services at all levels. Enhanced cash-compensation for voluntary sterilisation and fill rebate in income tax for specified donations for welfare purposes were some of the incentives popularised during the plan.
- The population policy during the **Seventh Five Year Plan (1985-90)** took a significant turn to make the family planning programme more effective. Its major objectives included:
  - Increasing the mean age at marriage for females to over 20 years
  - Promoting 'two-child family' norm

- Protecting over 42 per cent eligible couples by way of variety of contraceptives
- Enhancing child survival rate by reducing the infant mortality rate through universal immunization of infants and of prospecting mothers
- Generating environment for fertility decline through relevant socio-economic interventions
- Promoting female literacy and employment programmes and
- Providing population education to all children in 11 - 15 age-group and also to those out of educational institutions through Adult Education and Non-formal Education programmes.

- **The Eighth Plan (1992-97)** fixed up the target of achieving the crude birth rate of 26 per thousand, infant mortality rate of 70 per 1000 live births and the couple protection rate of 56 per cent. The plan initiated an Action Programme with main features of:
  - Improving the quality and out-reach of family welfare services in the field
  - Introducing new package of compensation incentives giving more flexibility to State governments
  - Initiating innovative programmes in urban slums for propagating family welfare activities
  - Adopting a differential strategy for focusing attention on 90 districts of the country where the crude birth rate is above 39 per 1000
  - Increasing the involvement of voluntary agencies and non-governmental organisations in family welfare programmes
  - Linking the rural development and poverty-alleviation grants to districts and panchayats on the basis of their performance in the control of birth rate and
  - Reducing the strong son-preference in many parts of the country.
- **In the Ninth Five-Year Plan (1995-2000),** the planning commission observed that given the present situation in the country the achievements are lagging behind the proposed goals for the year 2000.

In 1996, the existing family welfare programme was transformed

into the new Reproductive and Child Health (RCH) Programme. This new programme integrates all family welfare and women and child health services with the explicit objective of providing beneficiaries with high quality integrated RCH services..

- **Tenth Five Year Plan (2002-2007),** in order to make the family planning programme more effective consider the following objectives:
  - To achieve 8% GDP growth rate
  - Reducing of poverty ratio by 5 percentage points by 2007
  - Providing gainful high quality employment to the addition to the labour force over the tenth plan period
  - Reducing in decadal rate of population growth between 2001 and 2011 to 16.2%
  - Increase in literacy rate to 72% within the plan period and to 80% by 2012
  - Reducing of infant mortality rate to 45 per 1000 live births by 2007 and to 28 by 2012.
- **Eleventh Five Year Plan (2007-2012)** has considered the fllowing initiatives with regard to population control:
  - Accelerate GDP Growth from 7% to 10%
  - Increase agricultural GDP growth rate to 4% per year
  - Create 70 million new work opportunities and reduce educated unemployment to below 5%
  - Increase literacy rate for persons of age 7 years or above to 85%
  - Reduce infant mortality rate to 28 and maternal mortality ratio to 1 per 1000 live births
  - Raise the sex ratio for age group 0-6 to 935 by 2011-12 and to 950 by 2016-17.
- **Twelfth Five Year Plan (2012-2017)** of the Government of India has decided for the growth rate at 8.2% but National Development Council (NDC) on 27 December, 2012 approved 8% growth rate for 12th Five Year Plan. The government intends to reduce poverty by 10 per cent during the 12th Five Year Plan.

10.4.1 National Population Policy

The National Health Policy of 1983 emphasized the need for "securing the small family norms, through voluntary efforts and moving towards the goal of population stabilization." While adopting the health policy, Parliament emphasized the need for a separate National Population Policy. National Development Council in 1993 recommended "a national policy on population should be formulated by the government and adopted by the Parliament." The present population policy is in response to this national requirement and for guiding the strategies and programmes for achieving the goals set in this policy statement. India was the first country in the world to have a National Family Planning Programme in 1951. Since the beginning, in order to make the programme effective and fruitful the government has provided services on the one hand and encouraged the citizens by information, education and communication to use such services on the other hand. The guiding objectives of the family welfare programme of the country has remained to stabilise population at a level consistent with the needs of the national development. Some of the salient features are:

- The National Population Policy states that the objective of economic and social development is to improve the quality of lives of people to enhance their well being and to provide them with opportunities and choices to become productive assets in society.
- Population growth in India continues to be high on account of the large size of population in the reproductive age group, high total fertility rate due to the unmet need for contraceptive, and high wanted total fertility rate due to the high infant mortality rate and early marriage of girls.
- The immediate objectives of the National Policy is to address the unmet needs of contraception, health infrastructure, health personnel and to provide integrated service delivery for basic

reproductive and child health care. The long term objective is to achieve a stable population by 2045, at a level consistent with the requirements of sustainable economic growth, social development and environment protection

On the basis of the suggestions, a fresh draft was submitted to Cabinet which formed the basis for National Population Policy (NPP), 2000. The NPP 2000 has laid down objectives at three time frames: immediate, medium term, and long term. The medium term objective is to effectively implement inter sectoral strategies to bring down the total fertility rate (TFR) to a replacement level by 2010. The long term objective is to achieve a stable population by 2045, at a level consistent with the requirements of sustainable economic growth, social development, and eco-conservation. It has special focus on health and education, and envisages the target of stable population by 2045. This National Population Policy 2000 affirms the commitment of government towards voluntary and informed choice and consent of citizens while availing of reproductive health care services and continuation of the target-free approach in administering family planning services. It is based upon the need to simultaneously address, issues of child survival, maternal health and contraception, while increasing outreach and coverage of a comprehensive package of reproductive and child health services by government, industry and the voluntary non-government sectors, working in partnership. The National Population Policy 2000 has set the following goals:

- Universal access to quality contraceptive services in order to lower the total fertility rate to 2.1 and attaining two-child norm.
- Full coverage of registration of births, deaths and marriages.
- Universal access to information of birth-limitation methods and availability of totally free choice to citizens for planning their families.
- To reduce infant mortality rate below 30 per thousand live births and bring in sharp reduction in the incidence of low birth-weight (below 2.5 kg.) babies.

- Universal immunisation of children against vaccine-preventable diseases, elimination of polio by 2000 and near elimination of tetanus and measles.
- Reduction in the incidence of marriage of girls below the age of 18 to zero.
- Increase in the percentage of deliveries conducted by trained persons to 100% containing of sexually transmitted diseases.
- Reduction in maternal mortality rate to less than 100 per one lakh live births.
- Universalisation of primary education and reduction in the drop-out rates at primary and secondary levels to below 20% both for boys and girls.

10.5 INITIATIVES AND THEIR CRITIQUE

The National Measures of Population Control are:

10.5.1 Decentralised Planning and Programme Implementation

The 73rd and 74th Constitutional Amendments Act, 1992 made health, family welfare and education a responsibility of village panchayats. The panchayati raj institutions are an important means of furthering decentralised planning and programme implementation in the context of the NPP 2000. These committees may identify area-specific unmet needs for reproductive health services, and prepare need-based, demand-driven, socio-demographic plans at the village level, aimed at identifying and providing responsive, people-centred and integrated basic reproductive and child health care.

10.5.2 Convergence of Service Delivery at Village Levels

Efforts at population stabilisation will be effective only if we direct an integrated package of essential services at village and household levels. Inadequacies in the existing health infrastructure have led to an unmet need of 28 percent for contraception services,

and obvious gaps in coverage and outreach. Health care centres are over-burdened and struggling to provide services with limited personnel and equipment. A vast increase in the number of trained birth attendants, at least two per village, is necessary to universalise coverage and outreach of ante-natal, natal and post-natal health care.

10.5.3 Empowering Women for Improved Health and Nutrition

The complex socio-cultural determinants of women's health and nutrition have cumulative effects over a lifetime. Discriminatory childcare leads to malnutrition and impaired physical development of the girl child. Impaired health and nutrition is compounded by early child-bearing and consequent risk of serious pregnancy related complications. Maternal mortality is not merely a matter of health disadvantage; it is also a matter of social injustice. Low social and economic status of girls and women limits their access to education, good nutrition, as well as money to pay for health care and family planning services.

Programmes for Safe Motherhood, Universal Immunisation, Child Survival and Oral Rehydration have been combined into an Integrated Reproductive and Child Health (IRCH) Programme, which also includes promoting management of STIs and RTIs. Women's health and nutrition problems can be largely prevented or mitigated through low cost interventions designed for low income settings. The voluntary non-government sector and the private corporate sector should actively collaborate with the community and government through specific commitments in the areas of basic reproductive and child health care, basic education, and in securing higher levels of participation in the paid work force for women.

10.5.4 Meeting the Unmet Needs for Family Welfare Services

In both rural and urban areas there continue to be unmet

needs for contraceptives, supplies and equipment for integrated service delivery, mobility of health providers and patients, and comprehensive information. It is important to strengthen, energise and make accountable the cutting edge of health infrastructure at the village, sub-centre and primary health centre levels, to improve facilities for referral transportation, to encourage and strengthen local initiatives for ambulance services at village and block levels, to increase innovative social marketing schemes for affordable products and services and to improve advocacy in locally relevant and acceptable dialects.



CHECK YOUR PROGRESS

Q 1: Define population policies. (Answer in about 20 words)

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Q 2: What is meant by population control policies? (Answer in about 20 words)

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Q 3: What are the main objectives of India's population policy? (Answer in about 20 words)

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Q 4: What are the main objectives of national population policy (NPP) 2000 ? (Answer in about 30 words)

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10.6 LET US SUM UP

- Population and development have a very close relationship because

human beings are at the centre of concerns for any developmental activities, and people are the most important and valuable resource of any nation. Therefore, to understand the complex relationship between population and development, there is a need to study various aspects of population and its related theories and policies.

- If the population is not well controlled in India, instead of attaining her economic prosperity and scientific glory will remain a poverty stricken and backward country. Thus, the family planning programme must be tackled on a war footing and relentlessly pressed forward.
- The NPP 2000 has laid down objectives at three time frames: immediate, medium term, and long term. The medium term objective is to effectively implement inter sectoral strategies to bring down the total fertility rate (TFR) to a replacement level by 2010. The long term objective is to achieve a stable population by 2045, at a level consistent with the requirements of sustainable economic growth, social development, and eco-conservation.



10.7 FURTHER READING

1) Chaubey, P.K. (2001). *Population Policy for India – Perspectives, Issues and Challenges.* New Delhi: Kanishka Publishers & Distributors.

2) Stycos, J.M. (1977), Population Policy and Development, *Population and Development Review*. Vol. 3, 1 /2 / 103-112.

3) Government of India. (1998). *Ninth Five Year Plan 1997-2002.* New Delhi: Planning Commission.



10.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: A population policy is a set of measures taken by a state to modify the way its population is changing, either by promoting

large families or immigration to increase its size, or by encouraging limitation of births to decrease

Ans to Q No 2: A policy of attempting to limit the growth in numbers of a population, in densely populated parts of the world, by programmes of contraception or sterilization, is known as population control.

Ans to Q No 3: The main objective is to achieve a stable population at a level consistent with the requirements of sustainable economic growth, social development and environmental protection.

Ans to Q No 4: The objective of the NPP 2000 is to address the unmet needs for contraception, health care infrastructure and health personnel, and to provide integrated service delivery for basic reproductive and child health care.



10.9 MODEL QUESTIONS

Short Answer Questions (Answer each question in about 150 words)

Q 1: What are the two approaches to the family welfare and planning programmes?

Q 2: List out the measures to control population?

Q 3: What are the features of the National Population Policy launched by the government of India?

Long Answer Questions (Answer each question in about 350-500 words)

Q 1: Describe the concept of a population policy.

Q 2: What are the milestones in the evolution of population policy in India?

Q 3: What are the goals of National Population Policy 2000?

Q 4: Elaborate in detail the different population programmes of India?

Q 5: Briefly describe the initiatives of the government of India for population control?

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UNIT 11 : DEMOGRAPHIC STRUCTURES IN NORTH EAST INDIA

UNIT STRUCTURE

11.1 Learning Objectives

11.2 Introduction

11.3 Demographic Structures in North East India

- 11.3.1 Total Population
- 11.3.2 Decadal Growth Rate of Population
- 11.3.3 Density of Population
- 11.3.4 Sex Ratio
- 11.3.5 Rural-Urban Composition of Population
- 11.3.6 Religious Composition of Population
- 11.3.7 Fertility and Mortality Rates

11.4 Inter-State and Inter-Community Population Dynamics

11.5 Gender Perspective

11.6 Let Us sum Up

11.7 Further Reading

11.8 Answers to Check Your Progress

11.9 Model Questions

11.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- explain the demographic structures of North East India
- explain the different dimensions of population in the states of North East India.
- analyse the inter-state and inter-community population dynamics.

11.2 INTRODUCTION

India is a land of numerous cultures and people. The term “tribe” means a group of people that have been living at a particular place since time immemorial. The tribal people reside in approximately 15% of the

country's area. The Indian tribal population primarily resides in various ecological and geo-climatic conditions such as plains, forests, hills and inaccessible areas, scattered throughout India. According to Article 342 of the Indian Constitution, at present, there exist 697 tribes recognized by the central government. These Indian tribal groups have been recognized to reside in more than one state. It is due to the presence of these tribes that the country has such a diverse and varied flavour. Scheduled Tribes people constitute about 8% of the total population in India, with varying proportions in different States. They live in unique physical, socio-economic and cultural environment, isolated from general population. In view of their habitat and food habits, they form a distinct group compared to other populations. Their food intake is influenced by nature, with large seasonal variations, depending upon availability of agricultural and forest produce.

India‘s north-eastern region is extraordinarily diverse, distinct, and indeed distinguished on several counts. Apart from bordering itself with a few neighbouring countries, the entire land is a mixture of disparate races, civilizations, culture, and languages. The so-called North-Eastern Region (NER), which gained a definite geographical identity only after India‘s independence, comprises currently of the eight states: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura. Topographically, the region is a mixture of hills and plains, with abundance of rainfall, wide bio-diversities, and varied climatic conditions. While Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, and Sikkim are almost entirely hilly, Assam is largely a plain. The hills, while spreading across as much as 70 per cent of the entire landscape of NER, accommodate only about 30 per cent of its total population. There are more than 160 scheduled tribe groups in the region, with estimated 220 languages of Indo-Aryan, Sino-Tibetan, and Austric language families being spoken.

11.3 DEMOGRAPHIC STRUCTURES IN NORTH EAST INDIA

India is having the largest concentration of tribal population of the world (8.1%) and the north east region occupies 8.55% of the tribal

population in India. The region is shared by the tribal and non-tribal people. The percentage of non-tribal is 47.22 percent but the land area under the tribal as a whole is more than the area under non-tribal. Among the eight states, four states have the tribal population as majority; specifically, Mizoram (94.5 per cent), Nagaland (89.1per cent), Meghalaya (85.9per cent), and Arunachal Pradesh (64.2 per cent).

11.3.1 Total Population

The region is the home of extraordinarily diverse mosaic of ethnic groups having distinctive social, cultural and economic identity. The population of North Eastern region is 38.49 million. 69.20 percent of the population live in Assam (2001) while the rest is distributed in the other states in the region. The population of the region constitute only 3.57 percent of the population of India while it covers 7.57 percent of the total territorial area. The population of Assam is 31,205,576. Nagaon district has the highest population of 28,23,768 and lowest population in Dima Hasao with 2,14,102. Arunachal Pradesh total population is 13,83,727, Papumpare records the highly populated district with 1,76,573 and Dibang Valley has 8,004 as the lowest. The population of Sikkim is 6,10,577, East Sikkim which has the highest population of 2,83,583 and North Sikkim has the lowest 43,709. The populationTripura is 36,73,917 with West Tripura has 17,25,739 and Dhalai has 3,78,230 population which is the lowest. The total population of Mizoram is 1,097,206 and Aizawl has the highest with 4,00,309 and Saiha having the lowest population of 56,574. The population of Meghalaya state is 29,66,889. East Khasi Hills has the highest population of 8,25,922 and South Garo Hills has the lowest with 1,42,334. The population of Manipur is 28,55,794. Imphal West is highest population of 5,17,992 and Tamenglong has 1,40,651 which is the less populated district in Manipur. In Nagaland the total population is 19,78,502. Dimapur has the highest population of 3,78,811 and Longleng has the lowest population of 50,484.

There was negligible increase in population growth rate in

the North Eastern region. Nagaland recorded an exceptionally very high population growth rate which is to the extent of 4.4 percent from 1991-2001. The growth rate of Nagaland is more than 3 times as compared to India's population growth rate, more than 4 times to that of population growth rate of Assam and Tripura and double than that of Manipur, Arunachal Pradesh, Meghalaya and Mizoram. The population growth rate in other five states except Manipur has decreased during the last two decades. In Manipur the annual growth rate is only 0.10 percent during 1991-2001 from 1981-1991.As per census data from 1971 to 2011 about four percent of India's total population has been contributed from the north-eastern region. According to the census 2011, the total population of the region is about 45 million, of which Assam contributes the highest (68%) of the total population followed by Tripura (8 %). The population of Assam is 31 million compared to only 3.67 millions in Tripura, 2.96 in Meghalaya and 2.72 millions in Manipur. Sikkim records the least with 0.61 million population.

11.3.2 Decadal Growth Rate of Population

The growth of population in the north eastern states has been higher than the national average. The decadal growth rate ever since 1971-81 census shows that, except for Assam, the growth rate of population in all the north eastern states is higher than the national average of 24.66. Tripura recorded the highest growth rate (50.77 percent) followed by Nagaland (50.05 percent) in the period 1971-81. In the next decade (i.e. 1981-91), Assam has reported the lowest growth rate of population (24.24 percent) which is higher than the national average of 23.85 percent. During the period 1981-91 to 1991-2001, Nagaland records the highest growth rate of 56.08 per cent and 64.46 per cent consecutively. Except Assam and Sikkim all other states have recorded growth rate of population higher than the national level of 21.54 percent in the period 1991-2001. It is worth noting that Nagaland is the only state which has recorded negative growth rate of -0.47 per cent

during the period between 2001 and 2011, while other states like Arunachal Pradesh, Manipur, Meghalaya and Mizoram exhibit higher growth rate exceeding national figure of 17.64 per cent.

11.3.3 Density of Population

The North East Region has been experiencing not only high population growth rate but also uneven distribution of population across the states. The region is basically a rural economy which covers about 84 per cent rural population having an average population density of 173 people per sq km of area according to the 2011 census report. Along with increase in the size of population, the density of population per sq km has been increasing gradually in all the eight states.

In the last two decades, there has been a 15.23 per cent increase in density of population in the north eastern region compared to 17.53 per cent increase for the nation as a whole. In the period between 2001 and 2011, the region recorded high variability in the density of population. Assam has recorded high density of population even above the national average in 2001. The most sparsely populated found 13 persons per sq km in 2001. Out of the eight states, Assam and Tripura are the most densely populated states sharing almost 76.4 per cent of total NER population in 2011. In 2011, the North East region occupied total population of 45,588 thousand, with density varying from 17 persons per sq km in Arunachal Pradesh (the biggest state in the region) to 397 in Assam followed by Tripura (350), Meghalaya (132), Manipur (122), Nagaland (119) and Sikkim (86). Thus, unevenness of concentration of population has been the typical nature of the region. There is a high degree of population concentration in the central part of the region, where economic conditions and better infrastructural facilities ensure a quality life. In the peripheral mountainous portion of the region negligible concentration has been found due to isolation and inaccessibility.

11.3.4 Sex Ratio

Sex ratio is a significant demographic indicator in which a closer balance between the sexes has been recognized as a healthy sign of population composition. It signifies the status of women in the society. In this regard the north eastern states show no widespread discrimination against females as found in other parts of India. The region witnessed improved sex ratio during the last decade as it has risen from 937 in 2001 to 956 in 2011. In this period the north-eastern region experienced a higher sex ratio than the sex ratio of nation total. Thus, it is noticed that the picture of the north east region has not been bad overall, so far as sex ratio is concerned. As per 2001 Census, sex ratio of total ST population in Nagaland is 943. Zunheboto district recorded the highest sex ratio of 976 while Mon district has the lowest ratio of 899. Tripura sex ratio was 962 in 2001 which had increased to 959 in 2011. the sex ratio of ST population in Mizoram as a whole is 984. Sex ratio among Any Mizo (Lushai) tribes is above the state average; so is the case in respect of Pawi. Low sex ratio has been registered among Any Kuki Tribes (914), Chakma (929), and any Naga tribes (941). In Meghalaya Synteng (1024) and Khasi (1017) have recorded sex ratio higher than 1000 mark. Although Garo have recorded comparatively low sex ratio (979) in the state.

11.3.5 Rural-Urban Composition of Population

The pace of urbanization in the North East India has been lower than the national figure since 1981. Sector-wise distribution of population in north east region reveals that 81.64 per cent of the population covers rural area and urban population constitutes only 18.36 per cent which is much below the all India figure of 31.16 per cent in 2011. In recent period though Mizoram claims as the highest urbanized state in the region yet it records 48.49 per cent shortfall in the share of urban population. Assam is the least scorer

in this regard since 1981 having a huge shortfall of 85.92 per cent in 2011. Thus, North East India signifies the dominance of rural economy in the region with inaccessibility of all urban amenities for major part of the region.

11.3.6 Religious Composition of Population

The distribution of population according to religion reveals that not only Hinduism, Christianity has also been the predominant religion in north east region. Christians now comprise the majority of the population in Nagaland, Mizoram and Meghalaya. As per the 2001 Census report, the concentration of Christians is very high in Nagaland (90%), Mizoram (87%), Meghalaya (70.3%), Manipur (34%) and Arunachal Pradesh (18.7%). Hinduism is predominant in Tripura (85.6%) followed by Assam (64.9%), Sikkim (60.9%), Manipur (46%), and Arunachal Pradesh (34.6%). The concentration of Muslims is highest in Assam (30.9%) followed by Manipur (8.8%) and Tripura (8%). Typically, the Buddhists are largest in Sikkim (28%), followed by Arunachal Pradesh (13%). Though the concentration of Christians are the smallest in Tripura (3.2%) and Assam (3.7%) as far as the north east region is concerned yet these States record higher concentration of Christian population than the all- India figure of 2.3%.

11.3.7 Fertility and Mortality Rates

Birth rate and death rate are the two major demographic features that greatly affect the population dynamics of any region. According to the Sample Registration System of the Registrar General of India, the birth rates of the states of the region are comparatively lower than the rest of India. Out of the eight states, Manipur and Tripura record the lowest birth rate followed by Nagaland (16.8), Mizoram (17.1) and Sikkim (17.8) in recent period. During the last three decades, the birth rates have been found higher only in two states, viz., Meghalaya and Assam than the

national average. This indicates a very healthy demographic scenario of the region. Assam shows the poorest performance concerning reduction of death rate over the period of the last four decades. Over time since 1981, death rate of Assam has been higher than the national average. Here Manipur shows comparatively better result. Manipur records lower death rate not only than the states of the region but also the national average. Overall, north eastern states (except Assam) attain lower death rate than India which presents the evidence that all the States of the region are trying to comply with the desired goal of national population policy.

11.4 INTER-STATE AND INTER-COMMUNITY POPULATION DYNAMICS

The Northeast Region comprises the states of Arunachal Pradesh, Assam, Manipur, Nagaland, Meghalaya, Mizoram, Tripura and Sikkim. In this greater region, excluding Sikkim, more than two hundred ethnic communities, having distinctive cultural characteristics, inhabit in diverse ecological stretch. The north-eastern part of India is a vast topographical expanse comprising the mountains and hills of the eastern Himalayas wherein gracefully flows the mighty Brahmaputra, Barak, etc. The tribes such as Jaintias, Apatamis, Khasis, Garos, Mizos, Angami Nagas, Bodos and Kacharis as well as other tribes have sustained their cultures and traditions. This region, therefore, is stated as the most heterogeneous part of India with different food habits, languages, religions, dresses, customs, etc.

Nagaland is inhabited by 16 major tribes and other sub tribes. Lotha is the most urbanized tribe with 28.8 per cent urban population, while Tikhir is the least urbanized (0.6%). In Mizoram the Mizo (Lushai) tribes have the major community constituting 77 per cent of the total population followed by Chakma 8.5 per cent of total population and other tribes like Pawi, Lakher, Kuki and Hmar together have a sizeable population constituting 14 per cent of total population in the state. Meghalaya is predominantly a tribal state. Khasi constitute more than half of the total

population of the state (56.4%). Garo is second with 34.6 per cent and together constitute 91 per cent of the total ST population. Synteng is listed both as a sub-tribe under Khasi and also as a separate ST which constitute 0.9 per cent of total STs. Sikkim is a multi-ethnic state. Broadly, the population can be divided into Tribal and Non- Tribal groups. The Nepalese comprise over 70 percent of Sikkim's population. There are 26 major tribes and more than 100 sub tribes in Arunachal Pradesh. The Nyishi are the largest ethnic group in Arunachal Pradesh their population of around 3,00,000. The Meitei ethnic group represents around 53% of the population of Manipur state, followed by various Naga tribes at 24% and various Kuki-Zo tribes at 16%. In Assam 61.67% were Hindus, 34.22% were Muslims. Christian minorities (3.7%) are found among the Scheduled Tribe and Castes population. The Scheduled Tribe population in Assam is around 13%, of which Bodos account for 40% according to 2011 census.

In this greater region, excluding Sikkim, more than two hundred ethnic communities having distinctive cultural characteristics inhabit in diverse ecological stretch. North East is home to around four hundred million people including two hundred and thirteen of the six hundred thirty five tribal groups listed by the anthropological survey in India. Though each community is characterized by distinct identity, they have much in common with the culture and traditions of the neighbours. Indeed conflicts among the various communities are observed in this region. Despite the present situation of fractured relations, tensions and misunderstandings between the communities, there is still some hope of rebinding the ties of inter-community understanding and appreciation if we go dip into the resources of folklore and myths. Therefore, an attempt is made to explain how history mixing the folklore entered into determining relations between myriad communities inhabiting in the hills and plains of North-East India and to show some of these relations that still exist today. There is some hope of rebuilding the bridge of inter-community understanding if we revive the historical ties among these communities. Some of the examples of inter community in North East India are given below:

The Sherdukpen, a small tribe of Mahayana sect in West Kameng

District of Arunachal Pradesh, has an interesting myth which reflects that they are the descendents of a Tibetan prince who married an Ahom princess. Tibet lies in the far north of Sherdukpen habitat while Assam plains (Darrang and Sonitpur District in the northern bank of Brahmaputra) lie to the south. Influences emanating from both these regions characterize their life and culture. The Sherdukpens and their northern neighbours, the Monpas, have the tradition of winter visit to the plains of Darrang and Sonitpur districts close to the foot-hills region. They used to move down to a place called Doimara in the foothills and camp there for about three months for visit to the villages. From Doimara they would make several trips to the villages in the plains with their horses loaded with their produce and return with loads of paddy collected from the villagers.

The Nyishis of Arunachal Pradesh too has similar tradition of close cultural ties with the Assamese villagers of the plains. In many cases, the Ahom rulers even granted them temporary fishing rights in the ponds and marshes in the plains during the winter months. Like the Sherdukpen, the Nyishis too have great regard for items such as *endi-chadar* from the plains. The ceremonial attire of the Nyishi is incomplete without endi woven by the Assamese villagers.

11.5 GENDER PERSPECTIVE

According to the Gender Perspective, gender is different than sex. Sex refers only to the biological reality of male or female, gender refers to socially constructed roles which can change. While in principle there is nothing wrong with distinguishing between the biological reality and the cultural or personal expression of masculinity and femininity, those promoting mainstreaming the Gender Perspective hold that all social differences between men and women are the result of oppressive stereotypes and should be eliminated so that men and women participate in every activity of society in statistically equal numbers. While it is true that stereotypes have in the past prevented some from achieving their full potential, it is also true that there are real differences between men and women, particularly as regards motherhood and fatherhood. These

differences affect the free choices of women and men, and even when stereotypes and sex-based restrictions are eliminated, women and men cannot be expected to achieve statistical equality. The concern with gender emerged as feminist theorists sought to understand the complexities of women's subordination. The word came into mainly academic usage some 15 years or so after the re-emergence of late twentieth century feminism which, unlike its earlier manifestations, has made a significant dent in the male-dominated or andocentric society.

Gender inequality in North Eastern States of India can be observed in four different areas viz., education, employment, health and political participation. The gender related development indices of the eight states were compared with the corresponding national figure. It was found that four states had GDI above national level and the remaining four states had GDI values marginally below than that of India implying that women of the region enjoyed less disparity in terms of longevity, educational attainment and thus control over resources. The gender gap was estimated in areas like literacy rate, enrolment rate, work participation rate, sex ratio, infant mortality rate, life-expectancy at birth, women's political participation, etc. The gap was narrow for the states like Meghalaya, Mizoram and Nagaland in respect of literacy rate. The gender gap in literacy was the largest for Arunachal Pradesh among the North Eastern States. However it was always better than the national figure. Similarly, Meghalaya, Nagaland and Sikkim had done well in case of enrolment rate. Even in high school level, the enrolment rate of girls was more than that of boys in those states. But in Arunachal Pradesh and Assam the gender gap was wide in enrolment rate at different levels of education. Gender gap in work participation rate was less in Manipur, Nagaland and Mizoram. The prevalence of women market in Manipur might be the cause of the low gender gap in the state. However the situation was worse in Tripura, Assam and Sikkim where tribal population were relatively lower in comparison to other north-eastern states. As regards sex ratio we found that Meghalaya, Manipur, Mizoram, Tripura and Assam had better sex ratio and states like Sikkim, Arunachal Pradesh and Nagaland had sex

ratio much lower than that of the national average. Infant mortality rate was lower for the North Eastern States. Female infant mortality rate was higher than male infant mortality rate in the region except in the states of Sikkim and Tripura.

Similarly life expectancy at birth was more for women than for men in North East India. So it seems that the women of the region enjoyed better health status as compared to national level. Political participation of women at state and national level was lower for those states except Assam. However the participation at local level was almost one third for all the states of the region. But this might not indicate that women of the region are politically empowered or aware. There might be influence of male members of the family on the women as a result of which they acted as proxies of their male counterparts in the political domain. Although the status of women were relatively better in North Eastern States viz., Mizoram, Nagaland, Manipur and Meghalaya as compared to national level yet there were gaps in educational attainment, access to employment, health, political participation, etc. Giving property right, access to employment and educational opportunity to women thus might not change the picture. A revolutionary change in the social and cultural values and behavioural pattern is necessary to foster the process of achieving gender equality. As soon as women feel that they have the capability to operate the society at the same term as men then achieving gender equality would not remain as a distant dream.



CHECK YOUR PROGRESS

Q 1: Briefly state the density of population of North East India? (Answer in about 40 words)

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Q 2: What are the different factors of demographic structures? (Answer in about 30 words)

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Q 3: What is meant by gender perspective? (Answer in about 40 words)

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11.6 LET US SUM UP

- India's north-eastern region is extraordinarily diverse, distinct, and indeed distinguished on several counts.
- The population of North Eastern region is 38.49 million. 69.20 percent of the population live in Assam (2001) while the rest is distributed in the other states in the region.
- The growth of population in the north eastern states has been higher than the national average. The decadal growth rate ever since 1971-81 census shows that, except for Assam, the growth rate of population in all the north eastern states is higher than the national average of 24.66.
- The North East Region has been experiencing not only high population growth rate but also uneven distribution of population across the states.
- The pace of urbanization in the North East India has been lower than the national figure since 1981.
- According to the Gender Perspective, gender is different than sex. Sex refers only to the biological reality of male or female, gender refers to socially constructed roles which can change.
- The population of North Eastern region is 38.49 million. 69.20 percent of the population live in Assam (2001) while the rest is distributed in the other states in the region.

- The growth of population in the north eastern states has been higher than the national average. The decadal growth rate ever since 1971-81 census shows that, except for Assam, the growth rate of population in all the north eastern states is higher than the national average of 24.66.
- The North East region has been experiencing not only high population growth rate but also uneven distribution of population across the states.
- The pace of urbanization in the North East India has been lower than the national figure since 1981.
- According to the Gender Perspective, gender is different than sex. Sex refers only to the biological reality of male or female, gender refers to socially constructed roles which can change.
- Present fractured relations, tensions, conflicts and misunderstanding amongst the different plains and hill tribes of North-East India, there is some hope of rebuilding the bridge of inter-community understanding if we dip into the resources of history and folklore of the region. The oral history partly real and partly fictional created the environment of inter-community relations between diverse communities living in the hills and plains area. History, cited with folklore enters into determining content and quality relations between hundreds of communities inhabiting the hill and plains of Assam and rest of the North-East India.



11.7 FURTHER READING

1) Pandey, M.C. and Goel, N.P. (1994). “Population Trend in the North-Eastern Region”, in S. Mukherjee, et al (eds), *Demographic Profile of North-East India*. New Delhi: Omsons Publications.

2) Anand, S. and A. Sen (1995) “Gender Inequality in Human Development: Theories and Measurement” in Fukuda Parr and A.K. Shiv Kumar (eds.) *Readings in Human Development*. New Delhi: OUP.



11.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: In 2011, the North East region occupies total population of 45,588 thousand with density varying from 17 persons per sq km in Arunachal Pradesh (the biggest state in the region) to 397 in Assam followed by Tripura (350), Meghalaya (132), Manipur (122), Nagaland (119) and Sikkim (86).

Ans to Q No 2: The different demographic factors are age, sex, education level, income level, marital status, occupation, religion, birth rate, death rate, average size of a family, average age at marriage.

Ans to Q No 3: The gender perspective looks at the impact of gender on people's opportunities, social roles and interactions. Gender relations are accordingly defined as the specific mechanisms whereby different cultures determine the functions and responsibilities of each sex.



11.9 MODEL QUESTIONS

Short Answer Questions (Answer each question in about 150 words)

Q 1: Briefly explain the religious composition of population of North East India.

Q 2: Briefly state the rural-urban composition of population of North East India.

Q 3: Write short notes on the fertility and mortality rate of North East India.

Long Answer Questions (Answer each question in about 350-500 words)

Q 1: Elaborate the demographic structures of northeast India.

Q 2: Describe the inter-community, interaction among the tribes of North East India.

Q 3: Explain the demographic dynamics in North East from gender perspectives.

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UNIT 12 : DEMOGRAPHIC PROBLEMS IN NORTH EAST INDIA

UNIT STRUCTURE

12.1 Learning Objectives

12.2 Introduction

12.3 Poverty

- 12.3.1 Causes of Poverty
- 12.3.2 Poverty in North East India

12.4 Unemployment

12.5 Child and Women Trafficking

- 12.5.1 Causes of Human Trafficking
- 12.5.2 Government Policy adopted as Anti-Human Trafficking Measures

12.6 Immigration

- 12.6.1 Factors of Immigration

12.7 Inter-Community Feuds

12.8 Outmigration

12.9 Let Us Sum Up

12.10 Further Reading

12.11 Answers to Check Your Progress

12.12 Model Questions

12.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- discuss the different demographic problems in North East India
- explain the causes behind the demographic problems
- analyse the consequences of these problems.

12.2 INTRODUCTION

North Eastern region of India comprises of eight states- Assam, Meghalaya, Manipur, Nagaland, Tripura, Arunachal Pradesh, Mizoram and

Sikkim, respectively. This region covers a geographical area of 2,62,185 sq kms which is nearly 8% of the total geographical area of the country. This region is located between latitudes 29 degree and 22 degree North and longitudes about 89.46 and 97.5 East. Although the region has plenty of natural resources with bio-diversity, hydro-potential, oil and coal reserves and wealthy forest covers, economically this region is still lagging behind the other states of India. Due to different demographic problems in the region like poverty, unemployment, immigration, ethnic conflicts, human trafficking and outmigration, the region is still undeveloped. In this unit we shall discuss the different demographic problems of North East India.

12.3 POVERTY

Poverty has been usually defined in economic terms like income levels, property and living standards. People, whose income cannot fulfil their basic needs such as food, shelter and clothing, are considered to be poor. In India and the USA, the concept of "poverty line" is based on the income. Poverty is not only a condition of economic insufficiency; it is also a condition of social and political exclusion. Poverty is therefore to be seen not merely in economic terms but also in its social and political aspects. Poverty is linked with social and economic deprivations.

12.3.1 Causes of Poverty

Some of the causes of poverty are:

- Unequal distribution of income;
- Large families/joint families;
- Illiteracy;
- Low productivity;
- High population growth;
- Failures of the poverty eradication programmes.

12.3.2 Poverty in North East India

According to the Planning Commission, there has been a rise in poverty levels in the North Eastern States of India. 116.4 lakh

people in Assam, followed by 12.5 lakh in Manipur, 6.3 lakh in Tripura, 4.9 lakh in Meghalaya, 4.1 lakh in Nagaland, 3.5 lakh in Arunachal Pradesh, and 2.3 lakh in Mizoram live below the poverty line. Tripura and Arunachal Pradesh have shown a decrease in the poverty scale as Tripura and Arunachal Pradesh are affected with less poverty in 2009-10 than in 2004-05. Nagaland has registered an increase of 12 per cent in poverty followed by Manipur at 9.2 per cent, Mizoram 5.7 per cent, Assam 3.5 per cent and Meghalaya one per cent. India Spend has reported Meghalaya and Sikkim show the largest decrease in poverty in India. In Sikkim the percentage of population below the poverty line was 13.1% in 2009-10 and it decreased to 8.2% in 2011-12. In the same way, the poverty line in Meghalaya in 2009-10 was 17.1% and it decreased to 11.9% in 2011-12. In 2004-05, all the north eastern states showed a higher poverty ratio vis-à-vis India (37.2), except Tripura (40.0) and Manipur (37.9). In this regard Nagaland presents better performance than other states of the region as it recorded least poverty ratio of 8.8, followed by Mizoram (15.4) and Meghalaya (16.1). Poverty estimate in 2009-10 showed improved picture for some of the states in the region, viz., Tripura, Sikkim and Arunachal Pradesh, compared to 2004-05 estimate of poverty ratio. The poverty estimates provide a deteriorating trend in states like Nagaland, Mizoram, Meghalaya, Manipur and Assam. These states show higher poverty ratios vis-à-vis 2004-05 estimates. It is observed that rural-urban gap in reducing poverty ratio has been greater in Mizoram, where urban and rural areas account for 11.5 per cent and 31.1 per cent poverty ratio respectively in 2009-10. Urban poverty ratio is found to be higher for states like Manipur, Assam, Arunachal Pradesh, Meghalaya and Nagaland than the national average figure. Manipur and Assam record worse off situation than India in rural poverty estimation. Results also show that there is less than 10 per cent poverty level in 2011-12 in the urban area in states of Sikkim, Mizoram, Tripura and Meghalaya. In all the states the urban poverty is lower than rural area.

Some of the important problems of poverty include malnutrition, illiteracy, diseases and long-term health problems, unhygienic living conditions, lack of proper housing, high infant mortality rate, injustice to women and social ill-treatment of certain sections of society. Factors like restricted access to employment opportunities and income, lack of proper housing facilities, unhygienic environment, lack of opportunity to quality health and educational services prevail in the region.

12.4 UNEMPLOYMENT

Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim (added in 2002) and Tripura have high rates of education in India. Agriculture is the main occupation of the people but with the increase in education rate their dependence on agriculture is reducing. India Spend research has revealed that though the education rate is high and it is growing fast, there are not enough jobs and livelihood opportunities for the people. Almost all the educated persons are unemployed. In all north-eastern states unemployment in urban areas is higher than rural areas. The highest unemployment rate was in Tripura (urban areas) with 25.2% in 2011-12 which is the highest jobless rate India, followed by Nagaland (23.8%) and Manipur (7.1%). Meghalaya (0.4% in rural areas and 2.8% in urban areas) has the second-lowest unemployment rate (after Gujarat) in India in 2011-12.

There are highly diverse and vibrant natural resources in the North Eastern states, but the region is underdeveloped as compared to other states of India. The infrastructural deficiency, insurgency and market failure are the reasons for the underdevelopment of the region. In this state of underdevelopment, creation of employment opportunities is a grave concern for the region. The overall development is the only solution to bring out the region from its underdeveloped stage.

12.5 CHILD AND WOMEN TRAFFICKING

The word 'trafficking' is a legal term which means dealing or trading with something that is illegal. In other words, this is an act criminalized

by the existing legal norms. United Nations Office on Drugs and Crime (UNODC), in the year 2000, defined trafficking by the process, means and purpose of exploitation. According to this report, India is a source, destination and transit country for men, women and children trafficked.

The most important factor for fuelling human trafficking in North East Region is the fact that it is surrounded by international borders like China in the North, Bhutan in the West, Myanmar or Burma in the East and Bangladesh in the South. The threat of child and girl trafficking has assumed alarming proportions. Though child trafficking is prevalent all over the country, its incidence is quite high in the North-Eastern region. From the source of the Central Bureau of Investigation (CBI), Assam, it is found that during the period 2005-2010, 42.03 per cent children have been trafficked to states like Haryana, Uttar Pradesh, Rajasthan, Maharashtra and West Bengal, whereas 31.88 per cent children are sent to metro cities such as Delhi, Mumbai, Kolkata, etc., 14.49 per cent children are sent to unknown destinations, 7.25 per cent children are trafficked around the North Eastern region and 4.35 per cent are sent to other places. Women and children are the most vulnerable in the state. Due to open national and international border and loose security condition of North East India, the problem of human trafficking has become an unsolvable one.

Among these eight states, Assam ranks top in human trafficking cases during 2006-2013. In 2014, it occupied 4th rank with 407 cases contributing 7.4% of the total cases in India and in 2015, it occupied first rank with 1494 cases contributing 21.7% of the total of India. The statistics of women trafficking for the year 2015 is both alarming and a wake-up call for any civilized society. Engulfed by recurring flood and ethnic violence along with high poverty and illiteracy, Assam is one of the major sources of human trafficking victims in the country. Further, plagued by recurring ethnic conflicts and natural calamities such as flood, a large group of people tend to move outward. The targets of traffickers are refugee camps of internally displaced persons who are victims of ethnic conflicts, natural calamities, etc.

In Mizoram, the Government has taken several steps to curb the evils of human trafficking. It is the first state in the North East to formulate

the 'Victims of Crime Compensation Scheme'. However, in spite of these novel measures, human trafficking is still active in the state. In Meghalaya, human trafficking has spread even into the rural areas of the state and has the largest incidence of child trafficking after Assam. Tourism is the major industry in the state which has contributed to the recent mushrooming of guest houses and hotels. The recent cases that came to light of these service industries engaging in flesh trade is evidence of the seriousness of human trafficking in the state. Until recently, most of the children were trafficked to be employed as bonded labour in the mining of coal, or in tea stalls and other services.

Nagaland has witnessed growth in education, upward mobility, and urban population over the years. However, there is tremendous uneven development between urban towns like Kohima, Mokokchung and Dimapur and the far-flung districts. With growing urbanisation, there is also a huge demand for domestic helps, especially minor boys and girls. Over the years, there is an increasing flow of children as domestic helps from remote villages to urban towns. These children have become vulnerable targets for child trafficking. Since there is a dearth of employment opportunities in Nagaland, many young semi-educated girls of underprivileged background are lured with offers of jobs in economic establishments, massage parlours and find themselves duped or coerced into the commercial sex trade by ill-intentioned employers in metropolitan cities like Bangalore, Pune, Mumbai, Chennai, Delhi, Kolkata and Goa.

12.5.1 Causes of Human Trafficking

Push or Supply Factors

The push factors which operate in any under developed region can generally be divided into three categories viz., economic, socio-cultural, and political and legal factors. The economic factors include poverty arising out of illiteracy, ignorance, lack of access to knowledge and resources, unemployment, absence of livelihood opportunities, drug addiction of women and children either voluntarily or by force. Children kept in substitute homes run by dubious

organisations or individuals also seem to enhance the chances of the vulnerable to fall prey to trafficking.

Pull or Demand Factors

The pull factors emerge from the demand for women and children's bodies by immoral individuals, and organised criminals, who see trafficking as a lucrative and easy business, facilitate such men's cruel desire by setting up the sex industry. Some of the other pull factors include legal acceptance of prostitution as an industry in some regions which generate demand for women and children. The prospective victims, who usually fall prey to the designs of organised criminals, often come from the economically, socially, and culturally vulnerable sections of the society. The available evidence suggests the causes found in underdeveloped or backward societies are grounded in the culture that prejudices against women, the girl child and the downtrodden.

12.5.2 Government Policy adopted on Anti-Human Trafficking Measures

In India also, the government has taken several anti trafficking measures to prevent the exploitation of women and children from the threat of human trafficking. In the Indian Constitution, Article no. 23 (1) provides that, 'trafficking in human beings are prohibited and any contravention of this prohibition shall be an offence and punishable'. Article no. 39 (1) imposes duty on the state to direct its policy towards saving 'that children are given opportunities and facilities to develop in a healthy manner and in condition of freedom and dignity and children and youth are protected against exploitation'. In 1998, the Indian Prime Minister approved a National Plan of Action to combat trafficking and commercial sexual exploitation of women and children.

12.6 IMMIGRATION

The Northeast India has always been facing the problem of illegal

immigration from Bangladesh. There is an absence of estimates of the post-1971 illegal migrants to Assam and the other North Eastern States based on sound demographic tools. The unusual population growth of Muslim population in Assam in different census periods can be attributed to large scale Muslim immigrants pouring in to Assam. It is also important to note that the growth of Muslim population in Bangladesh has declined during 1974-2001 and the growth rate is lower than the growth of Muslim population in Assam. In Assam, the growth of Muslim population has been higher than the growth of Muslims in the all India level. Regarding undocumented migration in other North Eastern States, it is very high in Nagaland (5,32,438) and low in Arunachal Pradesh and Sikkim (42,098 and 52,800 respectively) during the period 1991-2001. Similarly the illegal migrants of other three states of Tripura, Manipur and Meghalaya are 1,47,030; 1,66,894 and 1,48,330 respectively during the period 1991-2001 and during this period the total estimated undocumented migrants in all the North Eastern States (except Mizoram) is 16,24,409.

12.6.1 Factors of Immigration

- Increasing pressure on land and mounting unemployment in Bangladesh due to uncontrolled steep rise in population and high density of population (964 per sq km, according to 2011 estimate).
- The large scale migration from Bangladesh to India has been possible mainly due to the porous India-Bangladesh border of 4,096 kilometres, the fencing of which has not been completed
- Better economic opportunities across the border.
- Large segments of population in Bangladesh uprooted by severe floods and cyclones.

12.7 INTER-COMMUNITY FEUDS

The inter-community feuds are experienced due to distrust, conflict, tension and disharmony. The problem of ethnic conflict is engendered

through grievances based on perceived deprivations and non-reciprocated expectations of the ethnic communities toward one another. The north-eastern region of India also bears witness to the problem of ethnic conflict. In fact, the region is often regarded as a conflict ridden area. The last decade of the twentieth century is best remembered in Manipur for the violent ethnic clashes between the Kukis and the Nagas which started in 1992 and continued till the year end of 1998. It was followed by clashes between Meiteis and Muslims in May 1993, Kuki- Paite clashes in 1997-1998. Nagaland has also experienced numerous ethnic conflicts which includes the Chakhesangs-Tangkhuls conflict in Phek district during 1995-1996. Assam was one of those states where linguistic issues have emerged as a dominant issue in the post-independent period. The most notorious language riot started in 1960-1961, before and after the passing of the Official Language Bill by the state Assembly. In both instances, there were violent conflicts between ethnic Assamese and Hindu Bengalis and there were deaths, destruction and sufferings as a result of inter-ethnic conflicts as well as of police attempt to control protest demonstration and movements. Socio-political development and economic growth have also contributed to ethnic tensions. In the mid-1980s there was tension and conflict between the Assamese and the Bengali Muslims, because of the agitation against the influx of foreigners. This conflict has now re-emerged in violent form under the leadership of the NDFB (National Democratic Front of Bodoland) and the ULFA (United Liberation Front of Assam). The state has also witnessed another ethnic clash between Bodo and Santhals in early 1996. In the same way, the other ethnic conflicts witnessed by the state include Karbi-Kuki and Dimasa-Hamr conflicts in the year 2003, Karbi-Dimasa conflict in the year 2005, Garo-Rabha Conflict in 2011, Bodo- Muslim conflict in the year 2008 & 2012 and so on. The aspiration for a distinct identity among the ethnic groups resulted in a number of ethnic movements demanding autonomy. As a result, at present there are several Autonomous Councils in the state.

The northeast region also experiences extremism and insurgency besides ethnic violence. There are a number of extremist organizations

like United Liberation Front of Assam (ULFA), National Democratic Front of Bodoland, National Socialist Council of Nagalim, Kuki National Army, Garo Liberation Front, Bru National Liberation Front, National Liberation Front of Tripura, Hmar People's Convention (Democratic), Zomi Revolutionary Army, All Tripura Tigers Force, Liberation Tigers of Arunachal, National Liberation Army of Arunachal, United Liberation Tigers of Arunachal, Revolutionary Army of Arunachal Pradesh, etc.

12.8 OUT MIGRATION

The economies of North East Region are underdeveloped with very weak industrial sectors and inflated service sectors. Moreover, industrialization has failed to take off in the region. The culture of bandhs in the region has created disorder within the education system. The rapid educational development, unemployment, underdeveloped economy and industrialisation, ailing educational system and infrastructure are the causes of outmigration in the North East Region. There is an increase in males from about 26 to 31 per cent during the same period that implies that unemployment issue in their region was becoming a major reason for outmigration. Study found that people from North East India are migrated in search of better availability of opportunities, facilities and services such as employment, education, infrastructure, amenities, etc.

The state of Tripura has lost its population by 27,400 persons due to high outmigration. Assam has also lost a significant number of persons due to outmigration. Arunachal Pradesh, Nagaland and Manipur are the least affected ones of outmigration. Considering the net effect of migration, it can be observed that all the constituent units of the region have gained by population, except Tripura which has lost. The main stream of out-migration from Assam is directed towards West Bengal, Meghalaya, Arunachal Pradesh and Manipur. The distribution of migrants from Manipur shows that the bulk (constituting more than half) is spread over Assam. Nagaland also received one-fourth of the total out-migrants from Manipur. About 89 per cent of the migrants from Meghalaya are found in Assam, another 3 per cent in West Bengal and 2 per cent in Nagaland. The latter

are the other states which have received significant proportion of migrants from Meghalaya. About two-third of the total migrants from Nagaland is directed towards Assam. The other states which have received persons from Nagaland are Meghalaya (7 per cent) and 6 per cent in Arunachal Pradesh. The main out-flow from Tripura is directed towards Assam, West Bengal and these two states of the Indian Union attract about 60 per cent and 26 per cent respectively, i.e. around 86 percent of the total out-migrants from Tripura. Manipur attracted about 3 per cent and Meghalaya 1.89 per cent. Out of the total out-migrants from Arunachal Pradesh, a heavier proportion (about 63 per cent) has gone to Assam, while only 7.51 per cent went to Meghalaya and 3.07 per cent to West Bengal.



CHECK YOUR PROGRESS

Q 1: Mention the Causes of poverty. (Answer in about 60 words)

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Q 2: Define Unemployment. (Answer in about 20 words)

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Q 3: Mention the reasons behind immigration. (Answer in about 60 words)

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12.9 LET US SUM UP

- According to the Planning Commission, in North East States there is a rise in poverty levels; there are 116.4 lakh of people in Assam, followed by Manipur 12.5 lakh, Tripura 6.3 lakh, Meghalaya 4.9 lakh, Nagaland 4.1 lakh, Arunachal Pradesh 3.5 lakh and Mizoram 2.3 lakh living below the poverty line.
- The highest unemployment rate was in Tripura (urban areas) with 25.2% in 2011-12 that is the highest jobless rate in India, followed by Nagaland (23.8%) and Manipur (7.1%). Meghalaya (0.4% in rural areas and 2.8% in urban areas) has the second-lowest unemployment rate (after Gujarat) in India in 2011-12.
- The North East Region is economically weaker compared to other parts of the country due to ethnic violence, armed conflicts and political movements for autonomy that intersect and create an environment that is not conducive for steady employment and social stability. These factors create an environment and a situation where the people, especially women and children, become highly vulnerable to human trafficking.
- The continuous exodus of people from Bangladesh to India's North East Region is changing the demography of the North Eastern States which is being resented by the local population.
- Ethnic conflict in its extreme from is characterised by large scale violence, widespread insurgency and extensive civil war causing death, decay, destruction, misery and sufferings. A prolonged continuation of such a situation may seriously weaken and disturb the social order and lead to its political-economic disintegration.
- The rapid educational development, unemployment, underdeveloped economy and industrialisation, ailing educational system and infrastructure are the causes of outmigration in the North East Region.



12.10 FURTHER READING

1) Goswami, N. (2006). *Illegal migration in Assam: A Concern for India's national security*. IDSA.

2) Kumar, B.B. (2015). *Tension and Conflict in North East India*. Facsimile Publisher.

3) Sen, S. and Nair, P.M. (2005). *Trafficking in Women and Children in India*. Orient Longman.



12.11 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Poverty means that the income level from employment is so low that basic human needs cannot be met. Poverty-stricken people and families might go without proper housing, clean water, healthy food, and medical attention. Each nation may have its own threshold that determines how many of its people are living in poverty. Causes of poverty are changing trends in a country's economy that is associated with the lack of education, unemployment, illiteracy, overpopulation, epidemic diseases and environmental problems.

Ans to Q No 2: Unemployment is defined as a situation where someone of working age is not able to get a job but would like to be in full-time employment.

Ans to Q No 3: Immigration involves the movement of people from their home country to a host country or region, to which they are not native, to live. There are many reasons why immigrants choose to leave their home countries, including economic issues, political issues, family reunification and natural disasters. The causes of immigration are economic issues, political issues, family reunification or natural disasters. Economic reasons include seeking higher wages, better employment opportunities, a higher standard of living and educational opportunities.



12.12 MODEL QUESTIONS

Short questions (Answer each question in about 150 words)

Q 1: Explain in brief push and pull factors of human trafficking.

Q 2: Distinguish between immigration and outmigration.

Long questions (Answer each question in about 350-500 words)

Q 1: Discuss the poverty and unemployment situation in North East India.

Q 2: Explain the immigration and outmigration in North East India.

Q 3: Elaborate in detail the child and women trafficking in North East India.

Q 4: What are the causes of immigration and outmigration in North East India?

Q 5: Discuss the intercommunity feuds in the North East Region.

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UNIT 13 : CENSUS 2011 (MAJOR FEATURES FROM NATIONAL DATA)

UNIT STRUCTURE

13.1 Learning Objectives

13.2 Introduction

13.3 Major Features of 2011 Census

- 13.3.1 Growth of Population
- 13.3.2 Composition of Population
- 13.3.3 Occupational Structure of Population

13.4 Major Demographic Changes Compared to Earlier Census

13.5 Let Us Sum Up

13.6 Further Reading

13.7 Answers to Check Your Progress

13.8 Model Questions

13.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- descibe the basic features of the census of India conducted in the year 2011
- explain the factual informations pertaining to different aspects of the population of India as per census 2011
- discuss the population composition of the country, sex ratio in the population, density of population in the country, religious affiliations of the population and so on as per the 2011 census data.

13.2 INTRODUCTION

India conducted its 15th decennial census in the year 2011, which was carried in two successive phases: house listing phase and population enumeration phase. House listing phase continued for about six months (from April 2010 to September 2010) while the population enumeration

phase started in the month of February 2011 and ended in the same month. It is important to note that information for national population register was also collected during the house listing phase of 2011 census (the information collected so will be used to issue a 12 digit unique identification number to all the residents of India under UIDAI).

Census 2011 collected the requisite information on various heads in 16 languages and the training manual for carrying out the census operations was also prepared in 16 languages. It is also important to note here that for the first time ever in history India collaborated with Bangladesh to conduct their first ever joint census in the areas along their border in 2011.

Census 2011 has also become the first census to collect the biometric information and it has also collected information on caste counts of the country for the first time (on an all India basis) after Independence. C. Chandramauli was the Registrar General and Census Commissioner of the 2011 census. In this unit, we will discuss the major features of the 2011 census.

13.3 MAJOR FEATURES OF THE 2011 CENSUS

13.3.1 Growth of Poulation

Census 2011 shows that India's population has increased up to 1.21 billion. India is now home to a whopping 1.21 billion people which accounts for around 17.5 per cent of world's total population. The 2011 census provisional figures, released on March 21st, reveal that around 181.5 million people were new addition to India's total population since 2001.During 2001-2011, population increased by 17.6 per cent in India.

Uttar Pradesh (UP) has become most populous state in India and Sikkim became the lowest populated state of the country. As per the 2011 census, UP has around 199 million people and the state alone shares around 16 % of India's total population .The state is immediately being followed by states like Maharashtra and Bihar (shares around 9 % of the total population growth and is being

followed by the state of West Bengal, Andhra Pradesh and so on in context of the growing population composition).

Table 13.1: Population Growth In India

State/Union Territory#	Total Population	Male	Female	% Of Decadal Growth
Jammu & Kashmir	12,548,926	6,665,561	5,883,365	23.71
Himachal Pradesh	6,856,509	3,473,892	3,382,617	12.81
Punjab	27,704,236	14,634,819	13,069,417	13.73
Chandigarh#	1,054,686	580,282	474,404	17.10
Uttarakhand	10,116,752	5,154,178	4,962,574	19.17
Haryana	25,353,081	13,505,130	11,847,951	19.90
Nct Of Delhi#	16,753,235	8,976,410	7,776,825	20.96
Rajasthan	68,621,012	35,620,086	33,000,926	21.44
Uttar Pradesh	199,581,477	104,596,415	94,985,062	20.09
Bihar	103,804,637	54,185,347	49,619,290	25.07
Sikkim	607,688	321,661	286,027	12.36
Arunachal Pradesh	1,382,611	720,232	662,379	25.92
Nagaland	1,980,602	1,025,707	954,895	-0.47
Manipur	2,721,756	1,369,764	1,351,992	18.65
Mizoram	1,091,014	552,339	538,675	22.78
Tripura	3,671,032	1,871,867	1,799,165	14.75
Meghalaya	2,964,007	1,492,668	1,471,339	27.82
Assam	31,169,272	15,954,927	15,214,345	16.93
West Bengal	91,347,736	46,927,389	44,420,347	13.93
Jharkhand	32,966,238	16,931,688	16,034,550	22.34
Orissa	41,947,358	21,201,678	20,745,680	13.97
Chhattisgarh	25,540,196	12,827,915	12,712,281	22.59
Madhya Pradesh	72,597,565	37,612,920	34,984,645	20.30
Gujarat	60,383,628	31,482,282	28,901,346	19.17
Daman & Diu#	242,911	150,100	92,811	53.54
Dadra & Nagar Haveli#	342,853	193,178	149,675	55.50
Maharashtra	112,372,972	58,361,397	54,011,575	15.99
Andhra Pradesh	84,665,533	42,509,881	42,155,652	11.10
Karnataka	61,130,704	31,057,742	30,072,962	15.67
Goa	1,457,723	740,711	717,012	8.17

Lakshadweep#	64,429	33,106	31,323	6.23
Kerala	33,387,677	16,021,290	17,366,387	4.86
Tamil Nadu	72,138,958	36,158,871	35,980,087	15.60
Puducherry#	1,244,464	610,485	633,979	27.72
Andaman & Nicobar Islands#	379,944	202,330	177,614	6.68

Source: Census Of 2011

Table 1 will give an overall idea of the growth percentage of population in the country and across the states of India. It will also help you to have the exact figures of total male and female population residing in the various states of the country. Among the states of India the highest decadal growth rate has been recorded in the state of Meghalaya (27.82%) while the least has been recorded in Kerala (4.86). Among the Union Territories the highest percentage of decadal growth rate has been recorded in Dadra and Nagar Haveli and least has been recorded in Lakshadweep.

It is important to note that though the overall population of the country has been increasing since the last census, the rate of growth of population recorded during the present census is much lower than that of the previous census. While the growth percentage of census was 21.15 per cent in 2001, it has lowered down to 17.6 in 2011. It is also important to note that the downfall in the rate of growth has happened after so many decades as such a trend was witnessed last only during the decade 1911-1921.

13.3.2 Composition of Population

- **Density of Population of the country:** Density of population in the country has shown a significant rise. The overall density of population in India has risen from 325 to 382 since 2001. Bihar has the highest density of population with around 1102 persons living per sq km in the state. Bihar is followed by States like West Bengal (1029 sq km), Kerala (860 person per sq km), Uttar Pradesh (829 person per sq km) and

so on. The minimum population density was recorded in state of Arunachal Pradesh (17 person per sq km) for both 2001 and 2011 Census. Among the Union Territories Delhi (11,320) occupies the first place becoming the most densely settled Union Territory of India followed immediately by Chandigarh (9258), Puducherry (2547), Daman and Diu(2191) and Lakshadweep (2149) and so forth .The table below will give you an overall idea about the densities of population state wise.

Table 13.2: Density of population in India as per 2011 census

State/Union Territory #	Density of population
Uttar Pradesh	829
Maharashtra	365
Bihar	1,106
West Bengal	1,028
Andhra Pradesh	308
Madhya Pradesh	236
Tamil Nadu	555
Rajasthan	200
Karnataka	319
Gujarat	308
Orissa	270
Kerala	860
Jharkhand	414
Assam	398
Punjab	551
Chhattisgarh	189
Haryana #	573
NCT of Delhi	11,32
Jammu and Kashmir	56
Uttarakhand	189
Himachal Pradesh	123
Tripura	350
Meghalaya	132

Manipur	128
Nagaland	119
Goa	394
Arunachal Pradesh	17
Puducherry #	2,547
Mizoram	52
Chandigarh #	9,258
Sikkim	86
Andaman and Nicobar Islands #	46
Dadra and Nagar Haveli #	700
Daman and Diu #	2,191
Lakshadweep #	2,149

Source: Census 2011

- **Sex Ratio of the country :** Sex Ratio of the country shows an upward trend. Sex ratio reveals an important dynamic about the gender situation of the country. It has been a valuable source to access the total population of women in India and the ratio of women to that of men in the country. It has been observed in India that "though the population sex ratio in the country has declined through most of the 20th century, recently it has shown an upward trend. It rose from 927 in 1991 to 933 in 2001 and to 940 in 2011."

  As per the 2011 census, the overall sex ratio of the country is 940 females against 1000 males. The present number is statistically 10 per cent more than the overall sex ratio recorded during the previous census, when the sex ratio of the country was 933 out of every 1000 males. Kerala has become the best state in the context of maintaining the gender parity in the population while Haryana has become the worst performing state in context of maintaining the same. 2011 census hold that the sex ratio of Haryana is 879 out of every 1000 males which is a comparatively skewed ratio when compared to the overall sex ratio of the country. The states of Jammu and Kashmir (889), Punjab (895), Uttar Pradesh

(912) and Bihar (918) are also the worst performing states in the context of maintaining gender parity in its population. All these states thus need to work holistically and judiciously in the line of maintaining gender scenario to minimize the imbalance in their population composition

The top-performing states in context of the maintaining the sex ratio of the country are Kerala (1084), Tamil Nadu (996), Andhra Pradesh (993), Chhattisgarh (991) and Orissa (979). However, all the states have shown better performances in the context of maintaining their overall sex ratio if we compare their present ratio to that of the ratio in the previous census.

Point of concern: The census 2011, however, has recorded a serious anomaly in the context of the overall sex ratio of the country. As per the 2011 census there has been an annoying downward fall which can be observed in the context of the child sex ratio of the country. The ratio as per the census has declined from 927 to 918 between 2001 and 2011. Such a declining trend clearly reflects the persistence of continuing biasness against females in Indian society, which is not a healthy sign. The census data also held that the decline is drastic in rural India from 934 to 923, but in absolute terms the urban ratio is equally worse at 905 in 2011, even marginally lower than the figure of 906 in 2001. Thus, both in the rural and the urban India a declining trend can be observed in the context of child sex ratio, which is going to affect negatively the overall sex ratio of the country in the coming decades. The gap so created hence needed to be corrected/mitigated as soon as possible to maintain gender ratio in the country.

Let us now look at the sex ratio of the country in a tabular form. The table below will give you an overall glimpse and comparative understanding about the sex ratio across all the states in the last two census periods.

Table 13.3: Sex ratio of India (2001/2011 census)

States /Union Territory #	Overall Sex Ratio 2011 Census	Sex Ratio 2001 Census
Uttar Pradesh	912	898
Maharashtra	929	922
Bihar	918	919
West Bengal	950	934
Andhra Pradesh	993	978
Madhya Pradesh	931	919
Tamil Nadu	996	987
Rajasthan	928	921
Karnataka	973	965
Gujarat	919	920
Orissa	979	972
Kerala	1084	1058
Jharkhand	948	941
Assam	958	935
Punjab	895	876
Chhattisgarh	991	989
Haryana	879	861
NCT of Delhi #	868	821
Jammu And Kashmir	889	892
Uttarakhand	963	962
Himachal Pradesh	972	968
Tripura	960	948
Meghalaya	989	972
Manipur	985	974
Nagaland	931	900
Goa	973	961
Arunachal Pradesh	938	893
Puducherry #	1037	1001
Mizoram	976	935
Chandigarh #	818	777
Sikkim	890	875
Andaman And Nicobar Islands #	876	846

Dadra And Nagar Haveli #	774	812
Daman And Diu #	618	710
Lakshadweep #	946	948

Source: Census 2011

- **Literacy Rate in the Country:** Literacy rate of the country has improved since the last census; this indicates a positive trend of school enrolment rate in the country. The overall literacy rate of India has increased by an average percentage of 8 per cent. 73 per cent is the total percentage of literacy in India as per 2011 census, which has increased from 64.8 per cent in 2001. The total percentage of male literacy is 80.9 per cent and the female literacy rate is 64.6 per cent. Male literacy has increased by an average of 5.6 per cent while in case of female literacy an increase of 10.9 per cent has occurred since 2001. All this indicates a progressive trend towards education in the country. Again as per the census, the overall literacy rate for members of the Scheduled Castes (SCs) is 66.1 per cent, (76.2 per cent in the urban area) which is nearly seven percentage points lower than that of the entire population of the country and of Scheduled Tribes (STs) are also lower at 59.0 per cent overall and 56.9 per cent in rural areas. It is only in urban areas that the STs have a literacy rate that marginally exceeds that of the SCs, (at 76.8 per cent against 76.2 per cent for the SCs). According to the 2011 census, 4.14 crore households have at least one graduate in the home. The census held that there has been a total 4.5% point increase in the number of households with at least one graduate or above in the last decades.

  It is important to note that the five states and Union Territories which have performed best in the context of the literacy rate in the country as per the census 2011 are: Kerala (94 per cent), Lakshadweep (91.8 per cent), Mizoram (91.3

per cent), Goa (88.7 per cent) and Tripura (87.2 per cent). The bottom five states and Union Territories in context of literacy as per 2011 census are: Bihar (61.8 per cent), Arunachal Pradesh (65.4 per cent), Rajasthan (66.1 per cent), Jharkhand (66.4 per cent) and Andhra Pradesh (67 per cent).

The census also held that the highest percentage of increase has taken place in the Union Territories, Dadra and Nagar Haveli, an increase of 18.6 points (from 57.6 per cent to 76.2 per cent) has occurred in the Union Territories. It is followed by the state of Bihar which witnessed an overall increase of 14.8 points (from 47.0 per cent to 61.8 per cent), Tripura by 14.0 points (from 73.2 per cent to 87.2 per cent) and so forth.

The census also held that the extent of female literacy is higher than male literacy in all states and Union Territories, except Mizoram where there exists an exact parity in the context of both male and female literates during 2001-11.The census also held that the gender gap in the literacy rate of urban and rural areas has been steadily declining in the country. The table below will give detail information about the rate of literacy in the country.

Table 13.4: Literacy rate of the country

States /Union Territory #	Literacy Rate In Percentages In 2011
Uttar Pradesh	67.68
Maharashtra	82.34
Bihar	61.80
West Bengal	76.26
Andhra Pradesh	67.02
Madhya Pradesh	69.32
Tamil Nadu	80.09
Rajasthan	66.11
Karnataka	75.36
Gujarat	78.03

Orissa	72.87
Kerala	94.00
Jharkhand	66.41
Assam	72.19
Punjab	75.84
Chhattisgarh	70.28
Haryana	75.55
NCT of Delhi #	86.21
Jammu & Kashmir	67.16
Uttarakhand	78.82
Himachal Pradesh	82.80
Tripura	87.22
Meghalaya	74.43
Manipur	76.94
Nagaland	79.55
Goa	88.70
Arunachal Pradesh	65.38
Puducherry #	85.85
Mizoram	91.33
Chandigarh #	86.05
Sikkim	81.42
Andaman & Nicobar Islands #	86.63
Dadra & Nagar Haveli #	76.24
Daman & Diu #	87.10
Lakshadweep #	91.85

Source: Census 2011

- **Rural and urban dichotomy:** The census 2011 holds that, "The growth in population has been more rapid in urban areas than in rural areas, and the share of the urban population has risen from 27.81 percent to 31.14 percent." But despite such an increase in country's urban population, India continues to remain predominantly a rural country.

  Altogether, 833.5 million persons live in the rural area as per Census 2011, which was more than two-thirds of the total population of the country; 377.1 million persons however

live in urban areas of the country. The census also held that the urban population of the country has gone up from 17.3 per cent in 1951 to 31.2 per cent in 2011, but despite such a growth India continues to remain rural. 833 million people of the country continue to live in rural India. This reveals that little changes have actually taken place in the context of the development demography of rural India in the last few decades. In fact, the total number of villages has actually increased from 6,38,588 (2001 census) to 6,40,867 (2011 census) which has been an increase of 2,279 villages. Table below will give you an overall idea about the rural urban growth in the country.

Table 13.5: Rural urban distribution of population as per 2011 Census

State /Union Territory #	Percentage of Rural Population	Percentage of Urban Population
India	68.84	31.16
Jammu & Kashmir	72.79	27.21
Himachal Pradesh	89.96	10.04
Punjab	62.51	37.49
Chandigarh #	2.75	97.25
Uttarakhand	69.45	30.55
Haryana	65.21	34.79
NCT Of Delhi #	2.50	97.50
Rajasthan	75.11	24.89
Uttar Pradesh	77.72	22.28
Bihar	88.70	11.30
Sikkim	75.03	24.97
Arunachal Pradesh	77.33	22.67
Nagaland	71.03	28.97
Manipur	69.79	30.21
Mizoram	48.49	51.51
Tripura	73.82	26.18
Meghalaya	79.92	20.08
Assam	85.92	14.08

West Bengal	68.11	31.89
Jharkhand	75.95	24.05
Orissa	83.32	16.68
Chhattisgarh	76.76	23.24
Madhya Pradesh	72.37	27.63
Gujarat	57.42	42.58
Daman & Diu #	24.84	75.16
Dadra & Nagar Haveli #	53.38	46.62
Maharashtra	54.77	45.23
Andhra Pradesh	66.51	33.49
Karnataka	61.43	38.57
Goa	37.83	62.17
Lakshadweep #	21.92	78.08
Kerala	52.28	47.72
Tamil Nadu	51.55	48.45
Puducherry #	31.69	68.31
Andaman & Nicobar Islands #	64.33	35.67

Source: Census of India 2011

The table above shows that the rural population is highest in Himachal Pradesh and is less in Goa. Again among the union territories the highest concentration of rural population can be found in Union Territory Andaman and Nicobar Island and less in Delhi. Among the states, urban population is highest in the state Goa and is lowest in Himachal Pradesh. Among the union territories, urban population is highest is in NTC Delhi while lowest is in Andaman and Nicobar

Table 13.6: Comparative view on rural urban growth in the country

Year	Percentage of Rural Urban Population		Rural urban ratio
	Rural	Urban	
1901	89.1	10.9	8.2
1911	89.7	10.3	8.7
1921	88.8	11.2	7.9
1931	88.0	12.0	7.3

1941	86.1	13.9	6.2
1951	82.7	17.3	4.8
1961	82.0	18.0	4.6
1971	80.1	19.9	4.0
1981	76.7	23.3	3.3
1991	74.3	25.7	2.9
2001	72.2	27.8	2.6
2011	68.8	31.2	2.2

Source: Census of India various years

The above table provides a picture of the changing pattern of rural urban demographic divide in India. The table statistics reveal that the total percentage of urban population was as high as 89.1 in the year 1901. During those decades the percentage of urban population was very less which accounted only up to a 10.9 per cent of the total population. However, the percentage of population living in urban areas has risen in the subsequent decades. This clearly reveals India's march towards a phase of rapid and speedy urbanization. It is significant to note that for the first time since independence there has been an absolute increase in urban population as compared to the rural population. As revealed by the census though India even today continues to be predominantly rural as only 31.2% of India's population today lives in urban India. The earlier persistence huge gap between rural and urban India has been gradually diminishing to an extent when we observe such demographic variances.

- **Religious inclination and the people of the country:** India has been a multi-religious country. It is a secular nation where people have the freedom to profess the religions of their own choices. Census 2011 reveals that out of 121.09 crores of total Indian population 96.63 crores (around 79.8 per cent) follow the religion 'Hinduism'. This clearly indicated that Hinduism is the dominant form of religion in India. Among the other religions, around 17.22 crore population of the country

profess and practice Islamism (14.2 per cent), 2.78 crores follow Christianity (2.3 per cent), 2.08 crores follow Sikhism(1.7 per cent), 0.84 crore follow Buddhism(0.7 per cent), 0.45 crores Jainism (0.4 per cent), and 0.79 crore (0.7 per cent) have other religions & persuasions and 0.29 crore (0.2 per cent) have not stated any religion. Muslim population is the second largest group in the country after the Hindus and who are then followed by groups like Christians, Sikhs, Jains and so on in the country

The 2011 census also depicted that the "Proportion of the Hindu population to the total population had declined by 0.7 percentage point since the time of last census enumeration. Similar is the case with the proportion of the Sikh population, it got declined by 0.2 percentage point. Again, Buddhist population of the country has also declined by 0.1 percentage point when compared to the last census data. However, an opposite trend can be observed in the case of the Muslim population. As the total proportion of Muslim population has increased by 0.8 percentage there was no significant change in the proportion of Christians and Jains.

- **Caste enumeration in 2011 census:** After 1931, the census 2011 has made the caste count in the country. This is the only instance of caste count on an all India level in the country in the post-Independence era. This happened on the insistence of coalition of the then several ruling party leaders including Lalu Prasad Yadav, Sharad Yadav and Mulayam Singh Yadav who also held support from the opposition parties like the Bharatiya Janata Party, Akali Dal, Shiv Sena and Anna Dravida Munnetra Kazhagam in the subject. As a result, census 2011 has collected information about ones caste during its enumeration. First findings of caste enumeration however have been revealed only on 3rd July 2015 by Union Finance Minister of the country.

13.3.2 Occupational structure of Population

According to 2011 Census, the total Indian population at the dawn of1st March, 2011 was 121.02 crore and the total workforce is estimated at 48.18 crore. That means 39.81% of the total population represent the work force of the country leaving a vast majority of about 60 per cent as non-workers, which indicates a larger proportion of dependent population in the country. Out of the estimated workforce 48.18 crore 11.94 crore are marginal workers and 36.24 crore are main workers.The 2001 Census has divided the working population of the country into four major categories: Cultivators, Agricultural Labourers,Household Industrial Workers and Other Workers.

As per Census 2011, the total number of agricultural workers in the country have increased from 23.41 crore (12.73 crore cultivators and 10.68 crore agricultural labourers) in 2001 to 26.30 crore (11.88 crore cultivators and 14.42 crore agricultural labourers) in 2011. The share of workforce engaged in the agriculture sector (comprising of cultivators and agricultural labourers) has come down from 58.2 per cent in 2001 to 54.6 per cent in 2011. And only 3.8% (1.83 crore) of workers are engaged in household industries and 41.6 % (20.03 crore) are other workers including nonhousehold industries, trade, commerce,construction and repair and other services.

Table 13.7: Workforce by Occupation-All India (In Crores)

	Census 2011	Census 2001
Total Population	121.02	102.87
Total Workers	48.18	40.22
Marginal Workers	11.94	9.03
Main Workers	36.24	31.22
1. Cultivators	9.58	10.32
2. Agricultural Labourers	8.62	6.34
3. House Hold Industry Workers	1.23	1.22
4.Other Workers	16.81	13.34

Source: Census Of India 2001 and 2011

Table 13.8: Sectoral Composition Of Work Force In India, 2011

Categories	Persons (Marginal & Main Workers)	% Total Workers	Male	Female
Cultivators & Agricultural Labourers	26,30,22,473	54.6	16,54,47,075	9,75,75,398
Household Industrial Workers	1,83,36,307	3.8	97,75,635	85,60,672
Other Workers	20,03,84,531	41.6	15,66,43,220	4,37,41,311

Source: Census Of India 2011



CHECK YOUR PROGRESS

Q 1: What is the total size of India's Population according to 2011 census?

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Q 2: Which State in India has the highest density of population?

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Q 3: What is the Sex ratio of the Country according to 2011 Census?

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13.4 MAJOR DEMOGRAPHIC CHANGES COMPARED TO EARLIER CENSUS

In the following we are comparing the Census 2011 and Census 2001 of India in terms of major demographic changes:

According to Census 2011, the total Indian population at the dawn of 1st March, 2011 was 121.02 crore against the 102.87 crore total Indian population at the dawn of 1st March, 2001, according to 2001 Census. There was an increase of 18.1 crore people since the census 2001. India covers 2.4 percent of world surface and contributed 16.7 per cent of the

world's population according to Census 2001 and 17.5 per cent of the world's population according to Census 2011.

During 2001-2011, population increased by 17.64 per cent in India and during 1991-2001, population increased by 23.86 per cent in India. During 2001-2011, the growth rate of population of rural and urban areas was 12.18 percent and 31.80 percent respectively .And during 1991-2001, the growth rate of population of rural and urban areas was 18.09 percent and 31.47 percent respectively. So the rural population growth during 2001-2011 represents a sharp decline of about 5.91 per cent over 1991-2001, whereas the growth rate for the urban population has seen a marginal rise .33 per cent over these two periods.

In 2011 Census, out of the total population, 68.84 percent belongs to rural population and urban population constituting 31.16 percent. And in 2011 Census, out of the total population, 72.2 percent belongs to rural population and urban population constituting 27.80 percent. It implies a sharp increase in urban population by 3.36 percent over the two periods.

In 2011, out of 121.02 crore Indian population 62.4 crore were males and 58.7 crore were females, whereas, in 2001 out of 102.87 crore total Indian population, 53.12 crore were males and 49.57 crore were females.The sex- ratio in 2011 Census has improved to 940 (comprising 947 of rural areas and 926 of urban areas) from 933 (comprising 946 of rural areas and 900 of urban areas) in 2001 Census. It is clear from the above data that sex-ratio in rural areas has increased by only 1 point from 946 in 2001 to 947 in 2011 but in Urban areas the sex-ratio has increased to the extent of 26 points from 900 in 2001 to 926 in 2011.

The child sex ratio was stand at 919 in 2011 against 927 in 2001 Census. It is important to note here that the child population in India has declined by 5.0 million (or – 3.0 %) between 2001 and 2011. This is because of the fact that there was a sharp decline of 8.9 million (or – 7.0%) in child population in rural areas and there is sharp increase in child population in urban areas by 3.9 million (or +10.3 %).

In 2001, out of 102.87 crore Indian population the rural population stands at 74.24 crore and urban population stands at 28.61 crore where

as in 2011 Census, out of the total population 121.02 crore, 83.81 crore represents the rural population and 37.71 crore represents the urban population.

The literacy rate of India has increased from 63.83 percent in 2001 to 74.04 percent in 2011.In Census 2011, literacy rate was 68.91 in rural areas and in urban areas it was 84.98. Where as in Census 2001, literacy rate was 58.7 in rural areas and in urban areas it was 79.9. There was clear decline of the rural urban literacy gap over the two periods from 21.2 percentage points in 2001 to 16.1 percentage points in 2011.

The density of population has gone up to 382 in Census 2011 from 325 in Census 2001.

According to 2011 Census, the total Indian workforce at the dawn of 1st March, 2011 was 48.18 crore as against the 40.22 crore workforce in 2001. That means in 2011, 39.81% of the total population represent the work force of the country where as it was 39.09% in 2001. In 2011,out of the estimated workforce 48.18 crore, 11.94 crore were marginal workres and 36.24 crore were main workers. Where as in 2001, out of the estimated workforce 40.22 crore, 9.03 crore were marginal workres and 31.22 crore were main workers. And out of the 36.24 crore main workers of 2011 of the country, 9.58 crore people were cultivators,8.62 crore people were agricultural labourers,1.23 crore people were house hold industry worker and 16.81 crore population were other workers including non-household industries, trade, commerce, construction and repair and other services. On the other hand, out of the 31.22 crore main workers of 2001 of the country 10.32 crore people were cultivators, 6.34 crore people were agricultural labourers, 1.22 crore people were house hold industry worker and 13.34 crore population were other workers. As per Census 2011, the total number of agricultural workers in the country have increased from 23.41 crore (12.73 crore cultivators and 10.68 crore agricultural labourers) in 2001 to 26.30 crore (11.88 crore cultivators and 14.42 crore agricultural labourers) in 2011. The share of workforce engaged in the agriculture sector (comprising of cultivators and agricultural labourers) has come down from 58.2 per cent in 2001 to 54.6 per cent in 2011.

The Crude Birth Rate (CBR) at all India levels has declined significantly from to 25.4 to 21.8 per thousand population during 2001 to 2011.The Crude Death Rate (CDR) at all India levels has declined significantly from 8.1 to 7.1 per thousand population during 2001 to 2011.Infant Mortality Rate (IMR) at all India levels has declined significantly from 66 to 44 per thousand live births during 2001 to 2011.Life expectancy at birth has increased from 62.91 to 67.13 years during 2001 to 2011.



CHECK YOUR PROGRESS

Q 4: What is the growth rate of India's Population during 2001-2011?

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Q 5: Derive the major changes in health indicators comparing Census 2011 and Census 2001 of India.(Answer in about 60 words)

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Q 6: State the status of rural -urban population comparing Census 2011 and Census 2001 of India.(Answer in about 60 words)

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13.5 LET US SUM UP

- Census of 2011 is the 15th census of India since 1872 and seventh census in operation since Independence.
- The tagline of 2011 census is **"Our Census Our Future".**

- Census of 2011 was held in two phases:
  - House-listing and housing census (carried between April to September 2010)
  - Population Enumeration (9 to 28 February 2011)
- It covered 35 States/Union Territories, 640 districts, 5,924 sub districts, 7, 933 towns both statutory as well as the census towns and a total of 6,40,930 villages.
- 11th March 2011 was set as the reference date for 2011 census, while in snow bound areas of the country 1st October 2011 was set as the reference date to carry out the census operations. In such areas population enumeration has happened during 11th to 30th September, 2010.
- As per Census 2011, the total population of India at 0.00 hours of 1st March 2011 is 1210.6 million. Of this total population 833.5 million is the rural population and other 371.1 million was the urban population.
- The population of India has increased by more than 181 million during the decade 2001-2011 The absolute addition of the population to the total population is slightly lower than the population of Brazil, the fifth most populous country in the world.
- 2011 census makes the milestone in the demographic history of the country as the percentage decadal growth during 2001-2011 has registered the sharpest decline since Independence. For 2001-2011 this decadal growth has become 17.64 percent which has declined by 3.90 percent points (i.e : from 21.54 percent) since the earlier census decade.
- India still remains predominantly rural with nearly 68.6% of Indian population still residing in villages. Out of the total of 1210.2 million populations the overall size of rural population has been 833.1 million.
- The total number of villages of India has increased during the phase of 2011 census. As per the record of the census 2011 goes, the total number of villages in India has increased from 6,38,588 (2001

census) to 6,40,867 (2011 census) which accounted for an increase of 2,279 villages in total.

- Uttar Pradesh has the largest rural population of 155.3 million (18.6% of the country's rural population) whereas Maharashtra has the highest urban population of 50.8 million (13.5% of country's urban population) in the country.
- The overall sex ratio of the country has increased from 933 in 2001 to 940 in 2011.However the child sex ratio has slipped to its lowest since Independence .The gap in the rural urban sex ratio in India has been recorded to be 21 (urban 926) (rural 947) as per 2011 census.
- The percentage of rural literacy is 68.91 per cent, while the percentage of urban literacy is 87.97 per cent in the country. The gap existing in rural and urban literacy rate is 16.06 per cent.
- Indian population accounts for 17.5% of the world's total population. The population of the country has been estimated to reach 1.3 billion by 2020, despite the decline in the overall population growth rate and slowdown of the birth rate in the last decade. India is the second most populated country in the world after China which hosts 19.4 percent of world's total population.
- India's population is said to be equal to the population of six countries namely Brazil, Pakistan, United States, Indonesia, Bangladesh, and Japan, when put together. This indicates the magnanimous scale of population that India holds. Such a population composition often put immense pressure on the vitality and the growth of the nation as when observed from a close angle, we can see that India suffers from many of the symptoms and the problems of overpopulation.
- The data of present census is also indicative of such a trend. India's low per capita income, over crowdedness of the cities, lack of employment opportunities, persistence of poverty, hunger, malnutrition, low standard of living, widespread unemployment, persistence of illiteracy, etc all are the symptomatic factors that indicate that the country needs to put a check on its population growth.



13.6 FURTHER READING

1) Census of India website, Office of the Registrar General and Census Commissioner, India.

2) Kurushetra : *A Journal of Rural Development*, Vol 60, no 9, July 2012.



13.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: According to 2011 Census the total population of India is 1.21 Billion.

Ans to Q No 2: Bihar has the highest density of population.

Ans to Q No 3: As per the 2011 census, the overall sex ratio of the country is 940 females against 1000 males.

Ans to Q No 4: During 2001-2011, population increased by 17.64 per cent in India.

Ans to Q No 5: The Crude Birth Rate (CBR) at all India levels has declined significantly from to 25.4 to 21.8 during 2001 to 2011.The Crude Death Rate (CDR) at all India levels has declined significantly from 8.1 to 7.1 during 2001to 2011.Infant Mortality Rate (IMR) at all India levels has declined significantly from 66 to 44 during 2001 to 2011.Life expectancy at birth has increased from 62.91 years to 67.13 years during 2001 to 2011.

Ans to Q No 6: In 2011 Census, out of the total population 68.84 percent belongs to rural population and urban population constituting 31.16 percent. And in 2011 Census, out of the total population 72.2 percent belongs to rural population and urban population constituting 27.80 percent. It implies a sharp increase in urban population by 3.36 percent over the two periods.



13.8 MODEL QUESTIONS

Short Qestions (Answer each question in about 150 words)

Q 1: What does the literacy rate of the country signify?

Q 2: Can you see any improvement in. the context of the sex ratio of the country? If so explain how? What does sex ratio of the country signify?

Q 3: Write a brief note on growth of population in India according to 2011 Census.

Q 4: Write a brief note on occuputational distribution of population in India according to 2011 Census.

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss the main features of 2011 Census. Elucidate if you find any difference in the context of the 2011 Census when compared to the previous Censuses of the country.

Q 2: Write an essay on the rural-urban dichotomy in the country.

Q 3: "Population itself is not a problem, qualitatively good population with manageable size represents the strength of the nation, but if it becomes unmanageable, it eats up the vitals of the nation and become an evil".

Critically elucidate the above statement in the light of contemporary population scenario of India.

Q 4: Derive the major demographic changes comparing Census 2011 and Census 2001 of India.

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UNIT 14 : CENSUS 2011 (MAJOR FEATURES FROM NORTH EAST REGION)

UNIT STRUCTURE

14.1 Learning Objectives

14.2 Introduction

14.3 States of North East India and Its Features as Per 2011 Census

- 14.3.1 Arunachal Pradesh
- 14.3.2 Assam
- 14.3.3 Meghalaya
- 14.3.4 Manipur
- 14.3.5 Mizoram
- 14.3.6 Tripura
- 14.3.7 Nagaland
- 14.3.8 Sikkim

14.4 Major Demographic Changes Compared to Earlier Census

14.5 Comparing the North East Region of India With All Indian Level With Respect to Census 2011

14.6 Let Us Sum Up

14.7 Further Reading

14.8 Answers to Check Your Progress

14.9 Model Questions

14.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- describe the major features of Northeast Region of India on the basis of the 2011 census data
- explain the major statistics of census 2011 and its analysis across the eight states of N.E India.

14.2 INTRODUCTION

North East is the eastern most frontier region of India. It comprises

of eight contagious states namely Arunachal Pradesh, Assam, Meghalaya, Mizoram, Manipur, Tripura, and Sikkim. The entire Northeast India is known for its diversities and heterogeneity in almost all the aspects of society , be in terms of its culture, race, ethnicity, language, dialects, cuisines etc. Alongside sharing its Geo spatial boundaries with neighbouring countries like Bhutan, Myanmar, Nepal, China, Bangladesh, the entire region has been a multiculturally fabricated hub, where melts diverse races, civilizations, cultures, and languages. Until independence, North Eastern Region (NER) consisted of Assam and the princely state of Manipur and Tripura. The state of Nagaland, Arunachal Pradesh, Meghalaya, and Mizoram has been carved out of Assam in subsequent time. Physiologically the entire northeast India covers an area of 255,037 sq km, which is nearly 8 percent of the total geographical area of the country.In this unit we shall briefly discuss the major features of each of the states in North East India like population frowth, density of population, lieracy rate, sex ratio etc on the basis of Census 2011 data.

14.3 STATES OF NORTH EAST INDIA AND ITS FEATURES AS PER 2011 CENSUS

Census 2011 has been carried out in all the eight states of North East India and it reveals important informations about the social and demographic features of the region.

Let us have a look at the various statistics as being revealed by the 2011 census to have a better understanding about each of the state in the NER. Let us first start our discussion with Arunachal Pradesh.

14.3.1 Arunachal Pradesh

Arunachal Pradesh is the frontier state located in the extreme North Eastern corner of India Union. Being formed as a separate state in the year 1987, the state shares a unique social, cultural, and demographic history of its own. Physiologically, the state is predominantly hilly and hence it accommodates a thin

population when compared to the other states of India. Both Patkai hills and Himalayas range covers much of the Arunachal Pradesh. Geo spatially, the state also shares its boundary with the neighbouring countries like China, Bhutan, and Myanmar. Area wise, though the state of Arunachal Pradesh is the largest state among the North eastern states of India, the population of the state is comparatively less when compared to its neighbouring states like Assam and the rest. Nevertheless, like all the other states of India, the census 2011 has been carried out in this state too and the census so conducted has made important revelations about the state and its demography. Let us try to learn the basic statistics of 2011 census about the state under following heads:

- **Total population:** As per 2011 census, the total population of the state is 13, 82,611, out of which 7,20,232 are male population and 6,62,379 female population.
- **Sex ratio:** The sex ratio was recorded to be 920 per 1000 males during 2011 which is slightly higher than the ratio being recorded in the previous census (i.e. 2001) but less when compared to the all India's rate of sex ratio (i.e. 940)
- **Literacy rate:** The overall literacy rate of the state was 66.95 percent, out of which percentage of female literacy is 59.57% and male literacy is 73.69%.Male literacy was highest in the state.
- **Density of population:** The density of population per sq km in the state was recorded at 17 person sq km which clearly indicates that the state Arunachal Pradesh is a sparsely populated state.
- **Child population and child sex ratio:** The total child population of the state is 2,02,759 and the child sex ratio is 960 as per 2011 census.

14.3.2 Assam

Area wise, Assam is 2nd largest landlocked state of North

East India. From the ancient time, the state has been a home to the various linguistic, racial and cultural groups. The state has been a composite whole, a melting terrain of the diverse ethnicities, cultures, religions etc. Since primordial times the state has a baffling variety of demography. Among all the neighbouring state of the N.E region, Assam has its unique identity and is being known for its socio-cultural and structural diversities. The 2011 census reveals some of the important features about this state. Let us try to learn about them under following heads:

- **Total population:** According to the 2011 census, the state comprises a total of 3,11,692,72 population, out of which 1,59,54,927 are the male population and 1,52,14,345 are the female population. According to the demographic statistics of the state, Assam shares the highest concentration of population among all the other states of the North East region. Further, the population of the state has increased by around 16.93% since the last census as per the latest census data.
- **Sex ratio:** The sex ratio of the state is 958 females per 1000 males. The ratio hence is slightly higher in the state when compared to the all India level,i.e. 940 (as per 2011 census)
- **Literacy:** Overall rate of literacy in the state is 73.18%, out of which the percentage of male literacy is 78.81% and female literacy rate is 67.27 %. There have been significant increases in the literacy rate when compared to the earlier recorded data i.e. 63.25 % during 2001 census. Thus there has been an upward shift in case of literacy in the state.
- **Density of population:** The density of population in the state is 397 per sq km, which is slightly higher than the all India level i.e. 382. Significantly the density of population has gone up when compared to the previous census which was 340 in 2011 census. This signifies that the population of the state has been growing rapidly.

- **Child population and child sex ratio:** The child population of Assam is 45,11,307 and the child sex ratio is 957 as per the census 2011 data.

14.3.3 Meghalaya

Meghalaya is the landlocked territory of lovely hills and mountains. Being known for its abounding beauty, Meghalaya, the once colonial capital of NER is an important state of N.E India. Meghalaya or popularly being called as "The Adobe of clouds" shares its boundary with districts like Goalpara, Kamrup, and Karbi-Anglong of Assam in north, have Cachar and North Cachar hills in the east and is bounded by Bangladesh in both the west and south. The 2011 census data about the state can be known under the following heads below:

- **Total population:** The total population of the state was 29,64,007 out of which 14,92,668 are the male population and 14,71,339 are the female population. The number of the child population in the state is 5,55,822 and the child sex ratio is 970 which is a comparatively decent number as compared to the other states of North East India.
- **Sex ratio:** The sex ratio of the state is 989 females per 1000 males. When compared to the all India level the sex ratio shows an upward trend, which is definitely a progressive sign in the context of the gender scenario of the state.
- **Literacy :** The overall literacy rate of the state is 75.48%. 77.17% is the percentage of male literacy while 73.78% is the percentage of female literacy in the state. Thus the rate of female literacy is slightly lower than the male literacy.
- **The Density of population:** The density of population in the state is 132 persons per sq km. When compared to the other states of North east India or the India as a whole the state seems to be sparsely populated.

14.3.4 Manipur

Manipur popularly acclaimed as the jewelled land, is another landlocked state of N.E India. It shares its boundary with the sister states of Nagaland and Mizoram and with the neighboring international country Myanmar.Geographically, the state have been bounded by Nagaland to the North, Mizoram to the South. Assam lies to its extreme west while Burma lies to its east. Let us have a look at, what census of 2011 has revealed about this state under the following heads:

- **Total Population:** As per the statistics of 2011 census goes, the total population of the state was 27,21,756 out of which 13,69,764 is the number of male population and 13,51,992 was the number of female population.
- **Sex ratio:** The sex ratio of the state is comparatively promising with 987 in every 1,000 males.
- **Literacy rate:** The overall literacy rate of the state was recorded to be around 79.89 %, which is a comparative decent percentage when compared to states like Bihar, UP, MP, Rajasthan and so on. Out of total literacy percentage, the percentage of male and female literacy was 86.49% and 73.17% respectively.
- **Density of population:** The density per sq km in the state is being recorded at 122 per sq km which indicated that the state is sparsely populated when compared to the other various states of India.

14.3.5 Mizoram

Every state of North East India is known for its scenic beauty and mesmerizing uniqueness. Mizoram is one such beautiful state of North East India known for its kaleidoscopic landscape and pleasant weather. The demographic parameters about the state have been revealed by the 2011 census. And as per the statistics of the census 2011 goes:

- **Total Population :** The total population of the state as per 2011 census was 10,91,014. The male population was 5,52,339 and the female population was 5,38,675 in total.
- **Sex ratio:** The sex ratio of the state was recorded at 975 females per 1000 males which indicate the state like many other states of NER needs to work on to bring a parity on sex composition of the state.
- **Literacy:** The overall literacy rate of the state is 91.58%, out of which 93.72% was the percentage of male literacy and 89.40% was the percentage of female literacy.
- **Density of the population:** The density of population was recorded to be around 52 people per sq km which are lesser when compared to all India level. This also clearly indicates that the state is sparsely populated.
- **Child population and child sex ratio :** The child population of the state is 165,536 and child sex ratio of the state is 971 as per 2011 census.

14.3.6 Tripura

Tripura, the third-smallest state in the country, is a mountainous state of the Northeast India. The state is bordered on its three sides by Bangladesh. The state since its origin has been a home to diverse cultural and religious groups. Like its culture and religion, the demography of the state is equally diverse and heterogeneous. Let us have a look at the important features of the state as per 2011 census data under the following heads:

- **Total population:** The 2011 census reveals the important statistics about the tiny state of north east India. As per the data of 2011 census goes the state share 0.3% of country's total population. The 2011 census also revealed that the total population of this Tripuri dominated land is 36,73,917 out of which 18,74,367 are the male population and 17,99,541 was the female population.

- **Sex Ratio:** The sex ratio of the state is 960 per 1000 males which is comparatively higher than the all India ratio.
- **Literacy rate:** The overall literacy rate of the state is 87.75 percent, out of which the rate of male literacy is 92.18% and the rate of female literacy is around 83.15 %.
- **Density of population:** However the density of population in this small state is as high as 350.The state is known for its dense settlements. The situation so arisen has aroused because of its geophysical condition. This is so because around 60% of the lands in the state are hilly and remaining 40% is only the flat and habitable lands. The flat land of the state ironically accommodates 65% of its total population.

14.3.7 Nagaland

Nagaland is a narrow mountainous territory between the Brahmaputra valley of Assam and Myanmar. Formed back as the separate state in the year 1963, the state is blessed with picturesque, landscapes, valleys and greenery. The 2011 census data about the state can be known under the following heads below:

- **Total Population:** As per 2011 census,19,78,502 is the total population of Nagaland 10,24,649 is the male population and 9,53,853 is the number of female population.
- **Sex ratio:** The sex ratio of the state as per 2011 census is 931 in every 1000 males. Birth preferences of the male are clearly visible through the sex ratio of the state. The state has the lowest sex ratio even when compared to the all India ratio of sex. The child sex ratio is 944 which is slightly better than the overall sex ratio in the state.
- **Literacy:** Overall literacy rate is 80.11% out of which rate of male literacy is 83.29% and the rate of female literacy is 76.69%.
- **Density of population:** Density of population per sq km is 119 in the state. The state, since is hilly, is sparsely populated.

14.3.8 Sikkim

Sikkim is a small landlocked state in North East India, formed in the year 1975.This state shares its international boundary with countries like Bhutan, Tibet, and Nepal. Being surrounded by the mighty Himalayas, the state is blessed with picturesque mountains, mesmerizing valleys, glacier, alpine meadows and thousand of variety. The highest mountain of India, Kanchenjunga is situated on the western border of the state enhancing the natural allure of the state.2011 census has revealed the following demographic data about the state:

- **Total Population:** As per 2011 census goes, this hilly state of India has a total of 6,07,688 population out of which male population is 3,21,661 and female population is 2,86,027. The sex ratio of the state is 889 females per 1000 males.
- **Sex Ratio:** The sex ratio in terms of females per 1,000 males in the state were 889.
- **Literacy:** Overall literacy of state is 82.20%, out of which the percentage of male literacy is 87.55% and female literacy rate is 76.43 %.
- **Density of population:** The density of population in the state is 86 per sq km, which indicates that Sikkim can be counted among the sparely populated states of India.
- **Child population and child sex ratio :** Child population in the state is 61,007 and the child sex ratio in the state is 944 which is quite a decent number.

14.4 MAJOR DEMOGRAPHIC CHANGES COMPARED TO EARLIER CENSUS

In the following we are comparing the Census 2011 and Census 2001 of North East Region of India in terms of major demographic changes:

According to Census 2011, the total population of North East Region of India at the dawn of 1st March, 2011 was 4.74 crore, which is nearly

3.9 percent of the total population of the country. On the other hand the total population of North East Region of India at the dawn of 1st March, 2001, according to 2001 Census was 3.15 crore, which is nearly 3.7 percent of the total population of the country.

Out of the eight North East States, Assam constituted the highest number of population (3.11 crore) with 65.6 percent of the entire population of North East region, according to Census 2011. Similarly, in Census 2001, out of the seven North East States, Assam constituted the highest number of population (2.66 crore) with 69.2 percent of the entire population of North East Region. The size of population in Arunachal Pradesh has increased from10.91 lakh in 2001 to 13.82 lakh in 2011.The population of Meghalaya also rose from 23.06 lakh in 2001 to 29.64 lakh in 2011.Again the total population of Manipur has increased from 23.88 lakh in 2001 to 27.21 lakh in 2011.Total population of Nagaland has decreased from19.90 lakh in 2001 to 19.78 lakh in 2011.During the same period the population of Tripura also rose from 31.99 lakh to 36.73 lakh. The population of Mizoram also rose from 8.89 lakh in 2001 to 10.91 lakh in 2011.And the size of population in Sikkim has increased from 5.40 lakh in 2001 to 6.07 lakh in 2011.

The Census report of 2001 revealed that the sex ratio in terms of females per 1,000 males were 935 for Assam,901 for Arunachal Pradesh,975 for Meghalaya, 978 for Manipur, 900 for Nagaland, 948 for Tripura,938 for Mizoram and 875 for Sikkim. On the other hand, the Census report of 2011 revealed that the sex ratio in terms of females per 1,000 males were 958 for Assam, 920 for Arunachal Pradesh, 989 for Meghalaya, 987 for Manipur,931 for Nagaland,960 for Tripura,975 for Mizoram and 889 for Sikkim.

The density of population of North Eastern States according to Census 2001 were- 340 persons per sq Km in Assam (which is highest in North Eastern States), 13 persons per sq Km in Arunachal Pradesh, 103 persons per sq Km in Meghalaya, 107 persons per sq Km in Manipur, 120 persons per sq Km in Nagaland, 304 persons per sq Km in Tripura, 42 persons per sq Km in Mizoram and 76 persons per sq Km in Sikkim.

On the other hand, the density of population of North Eastern States according to Census 2011 were- 397 persons per sq Km in Assam (which is highest in North Eastern States), 17 persons per sq Km in Arunachal Pradesh, 132 persons per sq Km in Meghalaya, 122 persons per sq Km in Manipur, 119 persons per sq Km in Nagaland, 350 persons per sq Km in Tripura, 52 persons per sq Km in Mizoram and 86 persons per sq Km in Sikkim.

The literacy rate among the North Eastern States, as par 2001 Census were- 63.3 percent in Assam, 54.3 percent in Arunachal Pradesh, 62.5 percent in Meghalaya, 70.5 percent in Manipur, 66.6 percent in Nagaland, 73.2 percent in Tripura, 88.8 percent in Mizoram (which is highest in North Eastern States) and 68.8 percent in Sikkim. On the other hand, the literacy rate among the North Eastern States, as par 2011 Census were- 73.18 percent in Assam, 66.95 percent in Arunachal Pradesh, 75.48 percent in Meghalaya, 79.89 percent in Manipur, 80.11 percent in Nagaland, 87.75 percent in Tripura, 91.58 percent in Mizoram (which is highest in North Eastern States) and 82.20 percent in Sikkim.

14.5 COMPARING THE NORTH EAST REGION OF INDIA WITH ALL INDIAN LEVEL WITH RESPECT TO CENSUS 2011

Since we have already discussed about the basic data of each of the North Eastern States let us now have a look at the tables below to have a more vivid idea about the features of NER as per the census data of 2011. The tables below will also help you to develop a comparative understanding status of the different states pertaining to various factors.

Table 14.1: Overall Statistics about North Eastern States

State	Population	Males	Females	Area (km^2)
Arunachal Pradesh	13,83,727	7,13,912	6,69,815	83,743
Assam	31,169272	159,54927	15214345	78,438
Manipur	2721756	1369764	1351992	22,327

Meghalaya	2964007	14,92,668	14,71,339	22,429
Mizoram	3671032	5,52339	5,38,675	21,081
Nagaland	19,78,502	10,24,649	9,53,853	16,579
Sikkim	6,07688	3,21,661	2,86,027	7,096
Tripura	2964007	18,71,867	17,99,165	10,486

Source: Census 2011. India

Table 14.1 will help you to gather a comparative understanding about the states of N.E India on aspects like overall population composition, number of males and females in the states, the dichotomy persists between rural and urban population across the state and total land area of each states. The table shows that among the North Eastern States it was Assam which has the highest concentration of population. The state was followed by the state like Meghalaya, Manipur, Nagaland, Arunachal Pradesh, Mizoram and Sikkim. As per the above table total population of NER is 474, 59,991 out of which 251, 74,780 are the males and 222, 85,211 are the females.

Table 14.2: Decadal growth rate of the North Eastern States

Name of State	Decadal growth rate in percentages (2011)
All India	17.64
Assam	16.93
Arunachal Pradesh	25.92
Manipur	18.65
Meghalaya	27.82
Mizoram	22.78
Nagaland	-0.47
Sikkim	12.36
Tripura	14.75

Source: Census 2011, India

Table 14.2 represents the decadal growth rate of the N.E states. The decadal growth rate is highest in the state of Meghalaya (27.82%) while lowest in Nagaland. Nagaland in fact has set a negative trend in the overall growth rate of population. Nevertheless all the other states of NER except Nagaland, Sikkim and Tripura have been able to maintain the

parity with the all India growth rate which is 17.64 %.

Table 14.3: Density of population in the North Eastern States

State	Area (Km^2)	Density of Population (Per Sq Km) 2011	Density of Population (Per Sq Km) 2001
All India	-	382	324
Arunachal Pradesh	83,743	17	13
Assam	78,438	397	340
Manipur	22,327	122	107
Meghalaya	22,429	132	103
Mizoram	21,081	52	42
Nagaland	16,579	119	120
Sikkim	7,096	86	76
Tripura	10,486	350	304

Source: Office of Registrar General of India, Ministry of Home Affairs, Statistical Year Book, 2013, Ministry of Statistics & Programme Implementation, Government of India, New Delhi.

The above table represents the density of population in NER: The density of population in Assam is 397 per sq km in 2011 which has shot up from 340 in 2001.In Arunachal Pradesh, the density of population is as less as 17 while in the Manipur and Meghalaya it was been recorded as 122 and 132 respectively. Again in the state of Mizoram, Nagaland, Sikkim and Tripura the density of population per sq km has been 52, 119, 86 and 350 respectively. Assam by virtue of being the largely plain state of the entire regions have the highest density of population per sq km and Tripura although being a smaller state area-wise in NER, have the second highest density of population after Assam.

Table 14.4: Sex Ratio In N.E States/Region

Name Of State	2001 Census	2011 Census
All India	933	940
Assam	935	958
Arunachal Pradesh	893	920

Manipur	974	987
Meghalaya	972	986
Mizoram	935	975
Nagaland	900	931
Sikkim	875	889
Tripura	948	961

Source: Census 2011: Provisional population totals Office of the Registrar General and Census Commissioner, India Ministry of Home Affairs, 31st March 2011.

The above table represents the sex ratio of all the states of North East India. The sex ratio at birth (SRB) indicates 'the number of live female births per 1000 male live births'. Sex ratio is a better indicator of the recent trends of gender preferences in the society. The ratio quantitatively represents 'relative male or female deficits at birth'

From the above table, it has been clear that there is a comparative paucity of females in the region except Manipur where sex ratio has been as high as 992 females per thousand males. However when compared to the overall sex ratio of India(i.e:940), five states of North Eastern States namely Manipur, Mizoram, Meghalaya, Assam, Tripura shows a promisingly upward trend while state like Arunachal Pradesh, Sikkim and Nagaland's still lags much behind the all India ratio. Further when we compare the sex ratio of 2011 census and 2001 census then we, however, can observe an upward trend in the context of the gender dynamics of NER.

Table 14.5: Literacy Rates In NER

Name Of State	Total Number of Literates	Male Literates	Female Literates
All India	74.04	82.14	65.46
Assam	73.18	78.81	67.27
Arunachal Pradesh	66.95	73.69	59.57
Manipur	79.85	86.49	73.17
Meghalaya	75.48	77.17	73.78
Mizoram	91.58	93.72	89.40
Nagaland	80.11	83.29	76.69
Sikkim	82.20	87.29	87.29

Tripura	87.75	92.18	83.15

Source: Census 2011: Provisional population totals Office of the Registrar General and Census Commissioner, India Ministry of Home Affairs, 31st March 2011

The above table represents the literacy rate of the entire eight states of the N.E. Region. Among the North Eastern States Mizoram has the highest rate of literacy and is being followed by the states like Tripura, Sikkim , Nagaland, Manipur, Assam and Meghalaya. The rate of literacy is lowest is Arunachal Pradesh. When compared to the all India rate of literacy, all the states of North East India except Arunachal Pradesh has shown an upward trend and has performed well in race of attaining universal literacy.

Table 14.6: Religion In North East India (2011 Census)

Religion	Total Percentage of Followers
Hinduism	54.02
Islam	25.05
Christianity	17.24
Buddhism	1.37
Jainism	0.07
Sikhism	0.07
Other Religions	1.97
Not Stated	0.19

Source: Census 2011 India, 31st March 2011

The religion in North east India is equally diverse like the rest of India. All religiously affiliated communities live across the eight state of the region. The above table clearly indicated the percentages of followers in each religions prevalent in the North Eastern Region of India .As far the data of the table shows, Hinduism is the largest followed religion in the region with as many as 54.02% of population profess the religion Hinduism. Next to the religion Hindu, it was the religion Islam which has the second highest number of followers. Christianity is the third most professed religion in the region. Buddhism, Jainism, Sikhism followers are comparatively meagre when compared to the previous three religions.

Table 14.7: Urban Agglomeration In North East India

Rank	Urban Agglo-Meration/City	State	Total Population As Per 2011 Census
1	Guwahati	Assam	12,60,419
2	Agartala	Tripura	5,22,613
3	Imphal	Manipur	4,14,288
4	Dimapur	Nagaland	3,79,769
5	Shillong	Meghalaya	3,54,325
6	Aizawl	Mizoram	2,91,822
7	Silchar	Assam	2,28,985
8	Dibrugarh	Assam	1,54,019
9	Jorhat	Assam	1,53,249
10	Nagaon	Assam	1,47,137
11	Tinsukia	Assam	1,25,637
12	Dhubri	Assam	1,09,234
13	Tezpur	Assam	1,00,477
14	Kohima	Nagaland	1,00,000
15	Gangtok	Sikkim	98,658
16	Itanagar	Arunachal Pradesh	95,650

Source: Census 2011: Provisional population Totals, Office of the Registrar General and Census Commissioner, India Ministry of Home Affairs, 31st March 2011.

The above table represents the concentration of urban population in the North Eastern States. Rank-wise it was the metropolitan Guwahati which has the highest concentration of population and has been ranked as the most urbanized urban agglomerates of the North East India. Next to Guwahati was the urban concentration of Agartala, Imphal, Dimapur, Shillong which occupies the second to fifth rank in order, in the series of the most urbanized region of the North East India. Though we can observe a significant rise of urban population in the N.E region during the last the few years, the region is yet to make its distinct mark when comes to the case of rapid urbanization.



CHECK YOUR PROGRESS

Q 1: What is the Sex ratio of Arunachal Pradesh according to 2011 Census?

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2: Which State has the highest literacy rate in NER?

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Q 3: In Which States of NER is Christianity a major religion?

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14.6 LET US SUM UP

- The total population of N.E states as per 2011 census is 4,54,86,789 out of which are 2,33,01,787 are the males and 2,22,85,211 are the females.
- Assam is the highly populated state in the N.E Region, while Mizoram is the lowest populated state.The total population of the N.E Region is around 46 million out of which 60% of the population lives in the state of Assam alone.
- Assam is the most densely populated state when compared to the other states of N.E region. Area wise though Arunachal Pradesh is the largest state of the region, the population residing in the state is much lesser when compared to state like Assam
- The overall density of population in the NE region is 159 person per sq km according to the 2011 census. Among the north-eastern states, the density of population is highest in the state of Assam with 398 people living per sq km and lowest in Auranchal Pradesh of N.E India with only 17 people living in per sq km.

- According to 2011 census, highest rate of literacy in the north eastern region has been recorded in the state of Mizoram. Arunachal Pradesh has the lowest literacy rate compared to its sister states in the region. Interestingly Mizoram occupies the second position in the all India ranking after Kerala in context of the literacy.
- Hinduism is the predominant religion in the entire north east India as per the statistics of 2011 census. The region has with around 54% population who follows the religion Hinduism. The next dominant religion in the region is Islamism.
- As per the 2011 census Nagaland, Mizoram, and Meghalaya are the three states of the North Eastern Region, where Christians people are in majority and people in these three states follow Christianity as their major religion.
- As per 2011 census, sex ratio is highest in the state of Manipur and is lowest in the state Sikkim. Although in general, the sex ratio of NER shows an upward trend in 2011 Census, the preferential tendency towards males in birth continues. Almost all the state shows have a male centric gender preference. Gender disparity thus exists in almost all the states of NER like the rest of India.
- According to 2011 census of India, Guwahati, the primate city of Assam have evolved as the largest urban agglomeration in the entire North Eastern Region. The city is then being followed by urban settlements like Agartala, Imphal, Dimapur ,Shillong, Aizwal, Silchar, Dibrugarh, Jorhat and so forth.
- The entire North Eastern Region like the rest of India continues to remain predominantly rural. The available rural urban statistics from the 2011 census reveals a vivid disparity that exists in the context of the rural and urban growth in the region.
- 2011 census also holds that the Northeast India has as many as 220 ethnic groups and almost an equal number of dialects. Among the ethnic groups, Bodos are the largest ethnic group in the region.
- The hills states of the region like Arunachal Pradesh, Nagaland, Meghalaya, Mizoram, are the states which are predominantly inhabited

by tribal population with diversities and differences existed even within each such tribal groups. Of all these states, Mizoram of North East India has the highest number of tribal population in the entire north-eastern region as per 2011 census. Statistically around 94.4% of its population belongs to the tribal categories of population.



14.7 FURTHER READING

1) Census of India website, Office of the Registrar General and Census Commissioner, India.



14.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: The sex ratio of Arunachal Pradesh is 920 female per 1000 males according to 2011 census.

Ans to Q No 2: Mizoram has the highest litaracy rate in NER.

Ans to Q No 3: In NER, Christianity is a major religion in the states of Nagaland, Mizoram, and Meghalaya.



14.9 MODEL QUESTIONS

Short Answer Questions (Answer each question in about 150 words)

Q 1: What kind of trend the population dynamics of each state shows according to Census 2011?

Q 2: Write briefly on the growth rate of population in the N.E region.

Q 3: Does gender disparity exist in North Eastern States of Assam? If so, explain how?

Long Answer Questions (Answer each question in about 350-500 words)

Q 1: "Was northeast predominantly a rural region? Elucidate your answer with proper facts and data.

Q 2: How does a male literacy rate vary from the female literacy rate of N.E region? What kind of trend does such variances portrays. Discuss in details.

Q 3: Give a comparative overview of the population dynamics of the different states of NER.

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UNIT 15 : TRENDS IN WORLD POPULATION

UNIT STRUCTURE

15.1 Learning Objectives

15.2 Introduction

15.3 Distribution of World Population

- 15.3.1 Distribution and Density of Population
- 15.3.2 Patterns of Population Composition
- 15.3.3 Factors Influencing the Distribution of Population

15.4 World Population c 600 A.D.

15.5 Population Estimates and Distribution: Medieval Period

- 15.5.1 Changes in Demography in Medieval Period: Various Factors

15.6 Recent Trends of World Population

15.7 Let Us Sum Up

15.8 Further Reading

15.9 Answers to Check Your Progress

15.10 Model Questions

15.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- know about the distribution of world population
- understand the patterns of population composition
- explain about the estimate of world population around 600 AD
- discuss the world population in the medieval period
- discuss the factors for changes in world population
- elucidate the recent trends in world population.

15.2 INTRODUCTION

This unit attempts to include a crucial aspect to the study of historical development of societies. The study of population has been constrained due to paucity of detailed data available for different parts of

the world. However, the available data, though limited, helps in reconstructing the trends and transition in population during the medieval period. The role of population (which in fact forms the basic unit of any society) and changes within them have also led to change in various aspects of human life. In this sense, they are not merely passive statistical data. The variations in the population of any society (more so in the case of medieval world) have led to changes in family structure, marriage and social interaction patterns. They have also forced large-scale changes at macro-levels to announce transition from the medieval to the modern, as in the case of Europe. This unit is an attempt to locate changes in the medieval society through the prism of populations.

15.3 DISTRIBUTION OF WORLD POPULATION

World population is unevenly spread all over the globe. Some places have a low concentration of population, like deserts, dense forests, and mountainous areas, whereas many areas are heavily populated, like coastal and deltaic plains, moderate climates, fertile areas, industrialized areas, and urban centres. This spread of population is known as the distribution of population. If we look at the factors responsible for the distribution of population, then all the factors may be broadly grouped under two categories: (i) geographical factors – latitude, altitude, relief, climate, mineral and energy resources, and (ii) socio economic factors, like industrialization, urbanization, type of economy, political scenario and public policies. Density is one way of expressing distribution. Density of population is expressed as the number of persons per sq. km. This is popularly known as arithmetic density.

15.3.1 Distribution and Density of Population

Population distribution can be analyzed by different criteria. In terms of continents, Asia has the largest share of population (about 60 per cent) followed by Africa, Latin America and Europe. According to the Population Reference Bureau, World Population Data Sheet, even by 2050, Asia will still have the largest share of population, but

it would decline from about 60 per cent to 57 per cent. But the major increase of population would take place in Africa, i.e., 12.7 per cent to 22.4 per cent and a major decline in population would take place in Europe, i.e., 7.2 per cent to 4.1 per cent. As the world's population has risen from 2.5 billion in 1950 to 6.7 billion in 2008, the proportion of those living in the developing countries of Africa, Asia, and Latin America, and the Caribbean has expanded from 68 per cent to more than 80 per cent. India and China, with a billion plus each in 2008, make up about 37 per cent of the total. Projections for 2050 show this shift to developing countries continuing. The share of those living in the more developed countries is projected to drop from about 18 per cent in 2008 to less than 14 per cent in 2050.

15.3.2 Patterns of Population Composition

The population of the world as a whole is ageing (5.6 per cent in 1975 to 7.4 per cent in 2005) both in more developed countries and less developed countries. The proportion of population below 15 years of age for the world as a whole has declined from 36.9 per cent in 1975 to 28.2 per cent in 2005. The proportion of the population in the age group of 15-64 has increased from 57.5 per cent in 1975 to 64.5 per cent in 2005. The continent of Europe is far ahead of all other continents in terms of proportion of young population in the below 15 years of age group, which is less than 16 per cent in 2005, and highest proportion in the age group of above 65 years, i.e., 15.9 per cent. It implies that the people of European origin, wherever they may be settled at present, are ageing at a faster rate, while the people of African origin are ageing at snail's pace. In case of people of Asian origin, the process of ageing has picked up during the recent decade.

15.3.3 Factors Influencing the Distribution of Population

- **Geographical Factors**
  - **Availability of water:** It is the most important factor for life. So, people prefer to live in areas where fresh

water is easily available. Water is used for drinking, bathing and cooking – and also for cattle, crops, industries and navigation. It is because of this that river valleys are among the most densely populated areas of the world.

- **Landforms:** People prefer living on flat plains and gentle slopes. This is because such areas are favourable for the production of crops and to build roads and industries. So, these areas tend to be less populated. The Ganga plains are among the most densely populated areas of the world while the mountain zones in the Himalayas are scarcely populated.
- **Climate:** An extreme climate such as very hot or cold deserts is uncomfortable for human habitation. Areas with a comfortable climate, where there is not much seasonal variation attract more people. Areas with very heavy rainfall or extreme and harsh climates have low population. Mediterranean regions were inhabited from early periods in history due to their pleasant climate.
- **Soil:** Fertile soil is important for agricultural and allied activities. Therefore, areas which have fertile loamy soil have more people living on them, as it supports intensive agriculture.

➢ **Economic Factors**

- **Minerals:** Areas with mineral deposits attract industries. Mining and industrial activities generate employment. So, skilled and semi–skilled workers move to these areas and make them densely populated.
- **Urbanisation:** Cities offer better employment opportunities, educational and medical facilities, better means of transport and communication. It leads to rural to urban migration and cities grow in size. Mega cities of the world continue to attract large number of migrants every year.

- **Industrialisation:** Industrial belts provide job opportunities and attract large numbers of people. These include not just factory workers but also transport operators, shopkeepers, bank employees, doctors, teachers and other service providers

- **Social and Cultural Factors:** Some places attract more people because they have religious or cultural significance. Many a times governments offer incentives to people to live in sparsely populated areas or move away from overcrowded places.

15.4 WORLD POPULATION *C* 600 AD

The population at the beginning of the common AD era, according to average estimates, was about 170-185 million. By the beginning of the seventh century AD, it seems to have increased to 195-220 million. The three main areas of population concentration in Europe and Asia in the first six centuries AD were the Mediterranean basin, India and China. The most populated areas of Europe were those lying under Roman rule, especially around the Western Mediterranean: Italy, Gaul (France) and Iberia (Spain and Portugal). Most cities of Western Roman Empire in Italy, Gaul and Iberia suffered a similar fate. Even when population growth resumed in North-West Europe, population density remained very low.

In Asia, population rose steadily in India as a result of progress in agriculture. But China's population suffered repeated losses as a result of invasions by the Huns. While population growth in Western Asia suffered as a result of frequent wars between Byzantines and Persians. Egypt, the most densely populated area in Africa, too suffered demographic losses as a result of these wars in the late sixth century. In sub-Saharan Africa, population growth continued to remain slow, only small pockets of population practised slash-and-burn agriculture, while south of the Sahara, hunter-gatherer economy prevailed.

15.5 POPULATION ESTIMATES AND DISTRIBUTION: MEDIEVAL PERIOD

Due to paucity of data it is very difficult to work out population figures for different parts of the world during the medieval period. These estimates have been made based on different methods for different regions. These estimates give us only a broad idea. However, a lot of work has been done on the demography of Europe.

- **Asia:** China's population estimated at 50-60 million in AD 600 rose to 110-120 million in AD 1500. The Chinese were far more advanced in technology than medieval Europe. The art of printing, use of navigational compass and gunpowder gave it an edge over Europe during the period. In India, population estimated at 50-55 million in AD 600 rose to 100-110 million in AD 1500. Its main demographic concentrations lay along the River Ganges. Moreland for the first time provided an estimate for the population of India for the year 1600 A.D. This estimate was a population of around 100 million.
- **Europe:** As already indicated the population estimates for Europe are available in a much organised manner. They help us to get an idea of trends in population over a long period of time. The population in Western Europe which had witnessed a slow rise from AD 500 suffered a setback as a result of epidemics in the latter half of the sixth century which persisted well into the seventh century. In West and Central Europe there was a three-fold growth between 1000 and 1340. The big decline started around the middle of 14th century (mainly because of plague) and by 1450 the total population of Europe was estimated around 50 million as compared to 73.5 million in 1000 A.D. The real increase was evident in around 1500 A.D. when the population of Europe was 81.8 million.

The demographic growth during 1050 to 1250 was also a result of expansion in cultivation, increase in productivity, spread of technology and growth of towns which contributed to better living conditions, a better diet and a rise in birth rate. Famines too were receding even though

subsistence crises struck the whole of Europe in 1005-6, 1031-3, 1050 and 1090. The twelfth and thirteenth century saw famines recur at almost regular intervals but as they affected only isolated regions the average population growth was not affected. The decline in wars and conflicts also had a positive effect on population growth. Infanticide, contraception or abortion procedures too seem to have declined in the thirteenth century. However, by the late thirteenth century population growth seems to have levelled off and may even have declined in the fourteenth century much before the demographic losses inflicted by the Black Death. The beginning of fourteenth century saw population levels peak in Europe.

15.5.1 Changes in Demography in Medieval Period: Various Factors

World population estimates from AD 600 to AD 1500 witnessed an overall increase from 195 million to 440 million, a slow average increase of less than one person per thousand in a year. Even this growth varied not only between regions but also within the same region. As far as Europe is concerned the period from AD 500 to AD 1450, witnessed an overall increase in European population from 27.5 million to 73.5 million in 1340 and declined to 50 million around 1450 AD. During this period the growth was not constant. In between there were periods when the population dipped sharply (especially after 1348 AD) and again started ascending.

Thus, demographic changes have been attributed to the development in modes of production. Improvements in farming led to an expansion in land under cultivation aided by the development and spread of ferrous metallurgy (iron axes, iron spades, iron edged hoes and ploughs). Population densities were highest where agricultural technology, urban development and spread of trade formed the salient features of the economy. Migration and urbanisation were two other important factors of demographic change. Other factors which influenced the fluctuations in population were the marriage pattern, fertility, birth and death trends, family

and household structure, diseases, famines and natural calamities etc. In this section we will analyse major factors which were responsible for fluctuations in population.

- **Migration and Urbanism:** Europe experienced continuous wars and conflicts from the sixth to the tenth century as a result of migration of Germanic tribes towards the east, while Slavonic tribes pushed south into the Balkans and eastwards till Volga. In the seventh century Arab tribes, under the banner of Islam, moved into North Africa and by the eighth century crossed over and conquered nearly whole of Spain. In the ninth century invaders from the east, the Magyar tribes occupied Hungary from where they invaded neighbouring countries of Europe.

  Urbanisation was yet another factor which contributed to changes in population distribution and its redistribution. The size of cities, despite elements of uncertainty, has been used to estimate total population, particularly where distribution of settlements is the only variable for demographic assessment. By the fourteenth century many urban sites may have accounted for nearly 7 to 8 per cent of the total population particularly in the Mediterranean Europe. By fifteenth century, population of Paris was 2,74,000, Bruges 1,25,000, Milan 1,25,000, Venice 1,11,000, Genoa 1,00,000 and Grenada 1,00,000.

- **Economic Changes/Growth:** The fall in population could also be a result of population outstripping resources. M.M. Postan suggested a 'crises of subsistence' in early fourteenth century and that a malnourished population had become 'calamity sensitive'. Decline in food production should have led to a rise in prices (due to scarcity). On the contrary there was a slump in food prices after 1350 AD and evidence of persistent stagnation. So if the prices of wheat fell it was because of lack of demand and not lack of production. Trade

and commerce also showed signs of contraction. Exclusivity of craftsman and urban regulations discouraged competition leading to decline in production.

- **Famines, Diseases and Epidemics:** The economic stagnation was accentuated by the famines, diseases and epidemics. The crowded urban centres, unhygienic living and poor medical facilities caused spread of epidemics. Famines that affected most parts of Europe after 1315 – Germany, Low Countries and France as a result of harvest failures caused by extremely rainy summers and very cold winters; epidemics of livestock diseases and warfare all contributed to increase death rate. But the towns, although severely affected by the Plague, continued to show signs of vitality with new towns coming up as a result of trade and commercial activities. Agricultural revival as a result of decline in demand for land meant that peasants could improve their volume of production, with a consequent rise in living standards and a fall in mortality rate.
- **Life Expectancy and Death Rate:** According to Russell there was rise in life expectancy from twenty two to thirty five years between 1100 and 1275. The life span of medieval women was not very high (frequent child bearing and heavy field work resulting in poor health made them more susceptible to disease), although their mortality rate is difficult to ascertain. However, it is difficult to examine the exact variations between the end of thirteenth and beginning of fifteenth century, the difference in death rate dependent on age and gender remain equally little known.
- **Birth and Fertility:** The birth rate and nuptiality too suffers from an absence of data on total population. Female population was much less documented and recorded than male, except perhaps for a small upper section of society and even in those registration of birth was partial and irregular. In the

long run this gives a relatively low average growth rate but because it lasted for nearly a century there is considerable evidence for population growth between 1050 and 1250. It appears likely that after the epidemic of 1363-4, the birth rate increased for two or three years. There is also evidence of extreme fecundity of women after the plague. This is obvious from comparison of fertility and ultimate descendents of couples made just before and after the epidemic.

- **Family and Household:** Marriage and family among other social bonds have become central objects for the understanding of past populations. 'Family Structure' not only influenced demographic trends but was in turn affected by population movements. The 'hearth' (household) statistics are the only source available for understanding family structure for the middle Ages. In Coltishall, Norflok, between 1349 and 1359, the fall in number of women holding a farm corresponded to replacement ratio of deceased tenants by their surviving sons. Thus socio-economic and cultural factors which influenced family structures in turn affected demographic variables.

15.6 RECENT TRENDS OF WORLD POPULATION

"Family reconstitution" is another method that exploits the nominative character of parish registers. French demographer Louis Henry's pioneering study in this area was followed by Michael Flinn and many others. This method involves the linkage of baptism and burial records in a single parish in order to reconstitute the life histories of whole families. For example, the linkage of a woman's marriage record to her own baptism establishes her age at marriage. The linkage of the baptisms of children born to her establishes the number of her children and the ages at which she bears them; her age at death reveals her life span. Thus when a sufficient number of families can be reconstituted, they form a population for which fertility and other rates such as birth rate can be calculated.

The proportion of people in developing countries who live in cities

has almost doubled since 1960 (from less than 22 per cent to more than 40 per cent), while in more developed regions the urban share has grown from 61 per cent to 76 per cent. Urbanization is projected to continue well into the next century. By 2030, it is expected that nearly 5 billion (61 per cent) of the world's 8.1 billion people will live in cities. India shares this global trend toward urbanisation. As a consequence cities are facing the problem of expanding urban slums. Like many other demographic changes, urbanization has both positive and negative effects. Cities and towns have become the engines of social change and rapid economic development. Urbanisation is associated with improved access to education, employment, health care; these result in increase in age at marriage, reduction in family size and improvement in health indices. As people have moved towards and into cities, information has flowed outward. Better communication and transportation now link urban and rural areas both economically and socially creating an urban-rural continuum of communities with improvement in some aspects of lifestyle of both. The ever increasing reach of mass media communicates new ideas, points of reference, and available options are becoming more widely recognized, appreciated and sought. This phenomenon has affected health care, including reproductive health, in many ways. For instance, radio and television programmes that discuss gender equity, family size preference and family planning options are now reaching formerly isolated rural populations. This can create demand for services for mothers and children, higher contraceptive use, and fewer unwanted pregnancies, smaller healthier families and lead to more rapid population stabilisation. But the rapid growth of urban population also poses some serious challenges. Urban population growth has outpaced the development of basic minimum services; housing, water supply, sewerage and solid waste disposal are far from adequate; increasing waste generation at home, offices and industries, coupled with poor waste disposal facilities result in rapid environmental deterioration. Increasing automobiles add to air pollution. All these have adverse effect on ecology and health. Poverty persists in urban and peri-urban areas; awareness about the glaring inequities in close urban setting may lead to social unrest.



CHECK YOUR PROGRESS

Q 1: What are the factors of population distribution? (Answer in about 40 words)

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Q 2: How is the world population distributed? (Answer in about 30 words)

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Q 3: How is density of population expresed? (Answer in about 10 words)

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15.7 LET US SUM UP

- This Unit focuses on important aspects of demographic changes in the medieval period. It also attempts to link the position to the modern period with changes in population patterns. Aspects like family, marriage patterns, births and death rates, urbanisation etc. affected various population shifts and were also responsible for bringing about new social, economic patterns.
- World population is unevenly spread all over the globe. Some places have a low concentration of population, like deserts, dense forests, and mountainous areas, whereas many areas are heavily populated, like coastal and deltaic plains, moderate climates, fertile areas, industrialized areas, and urban centres. This spread of population is known as the distribution of population.

- The study of medieval demography in recent times reflects a shift in emphasis in research. Increasing interest in the social institution of family, the functioning of the 'domestic unit of production and reproduction' has taken precedence over the study of population estimates of a particular time or region.
- Urbanisation is associated with improved access to education, employment, health care; these result in increase in age at marriage, reduction in family size and improvement in health indices. As people have moved towards and into cities, information has flowed outward. Better communication and transportation now link urban and rural areas both economically and socially creating an urban-rural continuum of communities with improvement in some aspects of lifestyle of both.



15.8 FURTHER READING

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2) Chandna, R. C. (2008), *Geography of Population: Concept, Patterns & Determinants*. 7th edition. Ludhiana: Kalyani Publishers.



15.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: The main factors determining population distribution are : climate, landforms, topography, soil, energy and mineral resources, accessibility like distance from sea coast, natural harbours, navigable rivers or canals, cultural factors, political boundaries, controls on migration and trade, government policies.

Ans to Q No 2: World population distribution is uneven. Places which are sparsely populated contain few people. Places which are densely populated contain many people. Population density is calculated by dividing the number of people by area.

Ans to Q No 3: Density of population is expressed as the number of persons per sq km.



15.10 MODEL QUESTIONS

Short Answer Questions (Answer each question in about 150 words)

Q 1: What are the sources of computing populations in the medieval world?

Q 2: Explain in brief recent trend in world population.

Q 3: How did the famines, diseases and epidemic affect the population in medieval period?

Q 4: Explain in brief the World Population *c* 600 A.D.

Long Answer Questions (Answer each question in about 350-500 words)

Q 1: Describe the different factors influencing the distribution of population.

Q 2: Describe the factors for change in demography of population in medieval period.

Q 3: Elaborate the recent trends in distribution of world population.

*** ***** ***



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Learner's Feedback on Course

Dear Learner,

Regarding the course as mentioned above, we would like to know your opinions and comments so as to improve the quality of self learning materials in future. Please respond to the following statements by ticking the number you feel most reflect your opinion. After completion of the additional comments, please detach the page and send/mail the same to us at the address given below.

The Director, Centre for Internal Quality Assurance, KKHandiqui State Open University
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(E-mail id: ciqa@kkhsou.in)

1. Approximately how many hours did you spend for studying the units in the course?

2. Please give your opinions (by √ mark) to the following items based on your reading of the block:

Sl. No.	Statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I.	The SLMs of the course fulfil the learning objectives set out in the beginning of each unit					
II.	The units of the SLM could satisfy my academic needs and expectations					
III.	The Unit writers have excellent knowledge about the course contents					
IV.	Language and contents of the units were presented at a level which I could readily understand					
V.	Ample opportunity for participation in the activities provided in the units					
VI.	Used enough Illustrations (Diagrams, tables etc.) for conceptual clarity					
VII.	Quality of content is engaging, relevant, and up-to-date					
VIII.	The self check questions are very helpful					
IX.	The Possible/model questions and the answers to check my progress have benefited me a lot					

Additional Comments: *(Please feel free to provide your open comments)*

1. Which aspects of the SLM, according to you, worked well?

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2. What sort of changes/improvements do you feel KKHSOU could implement to improve the overall quality of the SLM?

Thank you for taking the time to complete this form.

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