

1. Details of Module and its structure

Module Detail	
Subject Name	Geography
Course Name	Geography 03 (Class XII, Semester - 1)
Module Name/Title	Population Composition – Part 1
Module Id	legy_10301
Pre-requisites	Basic concepts about World population distribution, density and growth
Objectives	After going through this lesson, the learners will be able to understand the following: <ul style="list-style-type: none">• Population composition• Sex composition• Age Structure• Ageing Population• Rural Urban composition• Literacy• Occupational Structure
Keywords	Sex composition, Age and sex pyramid, literacy of the world Urban population

2. Development Team

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1. Population Composition

Population composition or the demographic structure refers to those characteristics of population which are measurable and which help us distinguish one group of people from the other. People of any country are diverse in many respects. Each person is unique in her/his own way. People can be distinguished by their age, sex and their place of residence. Some of the other distinguishing attributes of the population are occupation, education and life expectancy. These are some of the important components, which reflect the composition of population. They also help in setting future agenda for development.

2. Sex Composition

The number of women and men in a country is an important demographic characteristic. The ratio between the number of women and men in the population is called the Sex Ratio. In some countries it is calculated by using the formula:

$$\frac{\text{Male Population}}{\text{Female Population}} \times 1000$$

or the number of males per thousand females

In India, the sex ratio is worked out using the formula:

$$\frac{\text{Female Population}}{\text{Male Population}} \times 1000$$

Or the number of females per thousand males. The sex ratio is an important information about the status of women in a country. Sex-ratio is an index of balance between males and females in a given population. It is measured in terms of number of females per 1,000 males. Sex-ratio has a profound effect on other demographic features like, growth of population, marriage rates, occupational structure, etc.

For reasons unknown, male births exceed female births in almost all the societies. But a number of pre and post-natal conditions, at times, alter this situation very drastically. In developing countries infant mortality is higher among males than the females so that excess of males is cancelled out within one year. Even in developed countries, male mortality is higher than female mortality at all stages of life. As such excess of males at birth is progressively eliminated, until from about the age of 30 onwards there is an increasing dominance of females. In many developing countries, women being given a subordinate role in the society, often suffer high mortality rates in child birth. It leads to unfavourable sex-ratio. Overall sex- ratio in these countries is often unfavourable to females.

Apart from differential birth or death rates among the two sexes, the sex-ratio is also influenced by migration of either males or females, which has serious impact on sex-ratio. In earlier times international and long-distance migration almost always showed a marked predominance of males, thus creating a serious imbalance in the sex-ratio of both the sending and receiving areas.

The degree of sex-selectivity of internal migration appears to be closely related to the technical and economic evolution of a country concerned. In developing countries, especially in Africa and Asia, there is a marked predominance of male migration from villages to towns. In economically advanced nations the reverse is generally true. With the exception of migration to the centres of mining and heavy industries, and military towns, females also migrate from rural to urban areas.

An analysis of the differences in the sex- composition of rural and urban areas in different countries shows that the migration stream does not produce similar results. It is interesting to note that rural-urban differentials in sex ratios in the United States and in Western European countries are just the opposite of those in Asian countries like India. In the western countries, the males outnumber the females in rural areas and the females outnumber the males in urban areas. In country like India reverse is the case. The excess of females in the urban communities of the USA and the Europe is primarily the result of influx of females from their rural areas to avail of the vast employment opportunities in urban areas. Farming in rural areas remains largely a masculine occupation. By contrast, the sex ratio in Asian cities, especially in India, remains male dominant due to predominance of male migration.

Problems of housing, high cost of living, paucity of work opportunities and lack of security in cities discourage women to migrate from rural to urban areas.

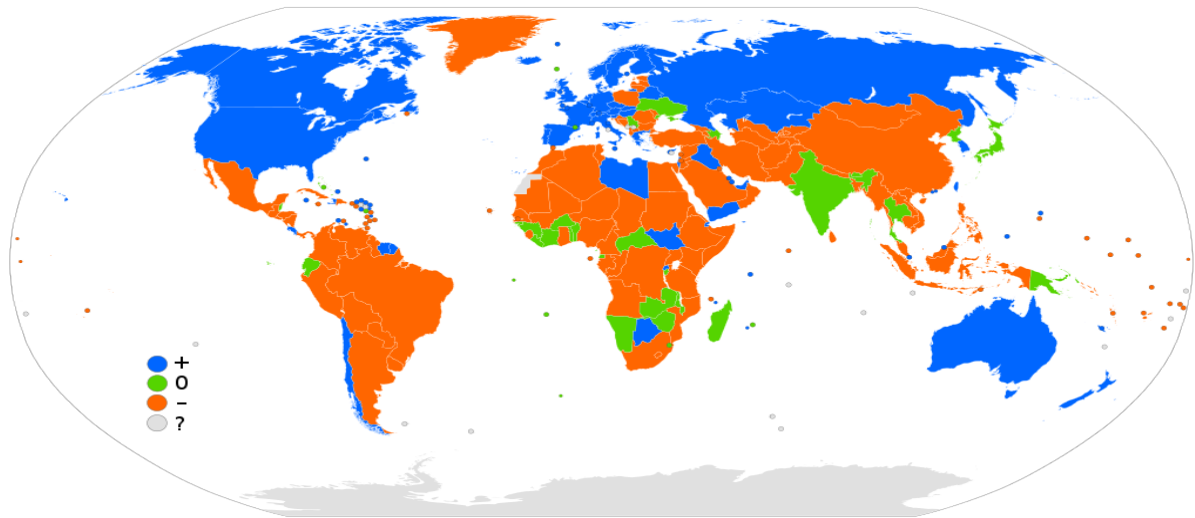


Fig No : 1 Map shows the net migration rate around the world. Blue denotes positive net migration (into the country), orange denotes negative net migration (out of the country), and green denotes a stable population with no net movement (in or out of the country).

Source:

https://en.wikipedia.org/wiki/Human_migration#/media/File:Net_Migration_Rate.svg

In regions where gender discrimination is rampant, the sex ratio is bound to be unfavourable to women. Such areas are those where the practice of female foeticide, female infanticide and domestic violence against women are prevalent. One of the reasons could be lower socio-economic status of women in these areas. More women in the population does not mean they have a better status. It could be that the men might have migrated to other areas for employment.

Natural Advantage v/s Social Disadvantage

Females have a biological advantage over males as they tend to be more resilient than males yet this advantage is cancelled out by the social disadvantages and discriminations that they face

On an average, the world population reflects a sex ratio of 990 females per 1000 males. The highest sex ratio in the world has been recorded in Latvia which is 1187 females per 1000males. In Contrast, the lowest sex ratio occurs in U.A.E, which is 468 females per 1000 males,

The world pattern of sex ratio does not exhibit variations in the developed regions of the world. The sex ratio is favourable for females in 139 countries of the world and unfavourable for them in the remaining 72 countries listed by the United Nations.

In general, Asia has a low sex ratio. Countries like China, India, Saudi Arabia, Pakistan, and Afghanistan have a lower sex ratio.

On the other extreme is greater part of Europe (including Russia) where males are in minority. A deficit of males in the populations of many European countries is attributed to better status of women, and an excessively male-dominated out-migration to different parts of the world in the past.

3. Age Structure

The age-structure of a population refers to the number of people in different age-groups. The size of the various age-groups does vary from one population to the other and also over the course of time. It is a useful tool for social scientists, public health and health care experts, policy analysts, and policy-makers; because it illustrates population trends like rates of births and deaths. These are important to understand because they have a host of social and economic implications in society, like understanding the resources that must be allocated for childcare, schooling, and healthcare, and the familial and greater social implications of whether there are more children or elderly in society.

If the number of children in the population is high, the dependency ratio will be high. A large size of population in the age-group of 15-59 years indicates the chances of having a larger working population. Similarly, a growing population in the age group of 60 plus indicates greater expenditure on the care of the aged. If there are large numbers of young people, and the birth rate is high, the population is youthful, as is the case in many developing countries of Asia, Africa and South America. On the other extreme, if the birth rate is low and the longevity among people is high, the population is said to be ageing. This is happening in many European countries, the USA, Canada and Japan. At times, extreme events like wars and natural calamities can distort the age-structure, because of losing population in certain age- groups.

Generally, population of a country is broad grouped under three, age-groups: Children (0-14 years); adults (15-59 years); and aged (60 years and above).

Examination of age-group statistics of different parts of the world reveals that the proportion of adult population is least variable of the three groups. The major regional differences lie in the proportions of children and the aged

Age- Sex Pyramid

The age-sex structure of a population refers to the number of females and males in different age groups. A population pyramid is used to show the age-sex structure of the population. The shape of the population pyramid reflects the characteristics of the population. The left side shows the percentage of males while the right side shows the percentage of women in each age group.

4. Expanding Populations

The age-sex pyramid of Afghanistan you can see is a triangular shaped pyramid with a wide base and is typical of less developed countries. These have larger populations in lower age groups due to high birth rates. If you construct the pyramids for Bangladesh and Mexico, it would look the same.

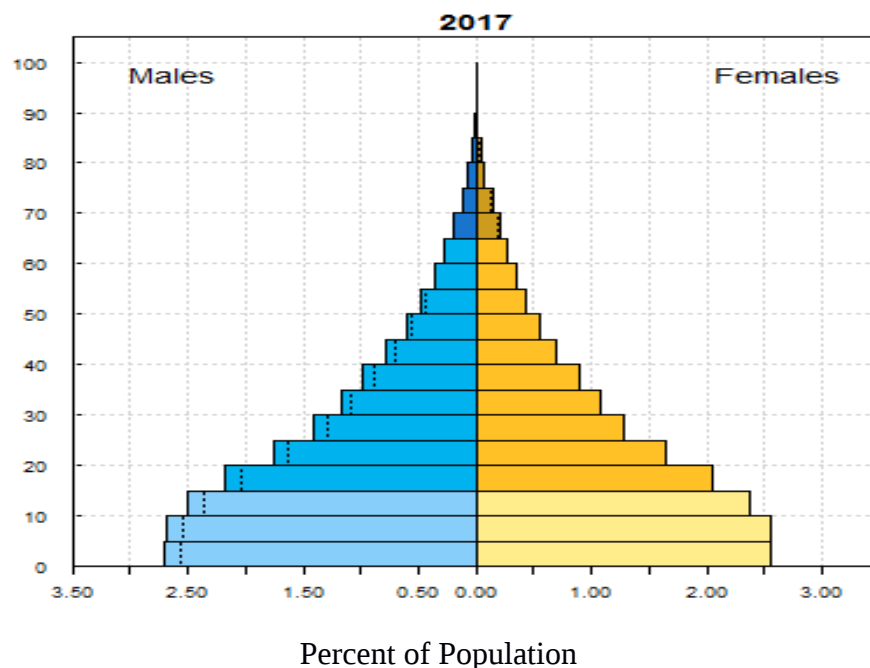


Fig No :2 The dotted line indicates the excess male or female population in certain age groups. The data are in thousands or millions

Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision

Constant Population

Australia's age-sex pyramid is bell shaped and tapered towards the top. This shows birth and death rates are almost equal leading to a near constant population.

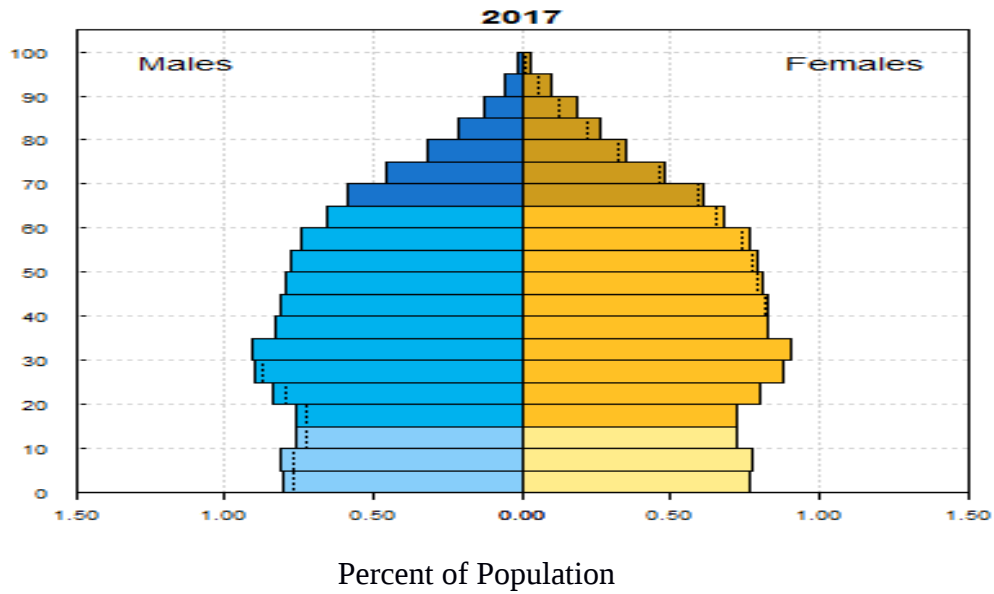


Fig No :3 The dotted line indicates the excess male or female population in certain age groups. The data are in thousands or millions.

Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision.

Declining Populations

The Japan pyramid has a narrow base and a tapered top showing low birth and death rates. The population growth in developed countries is usually zero or negative

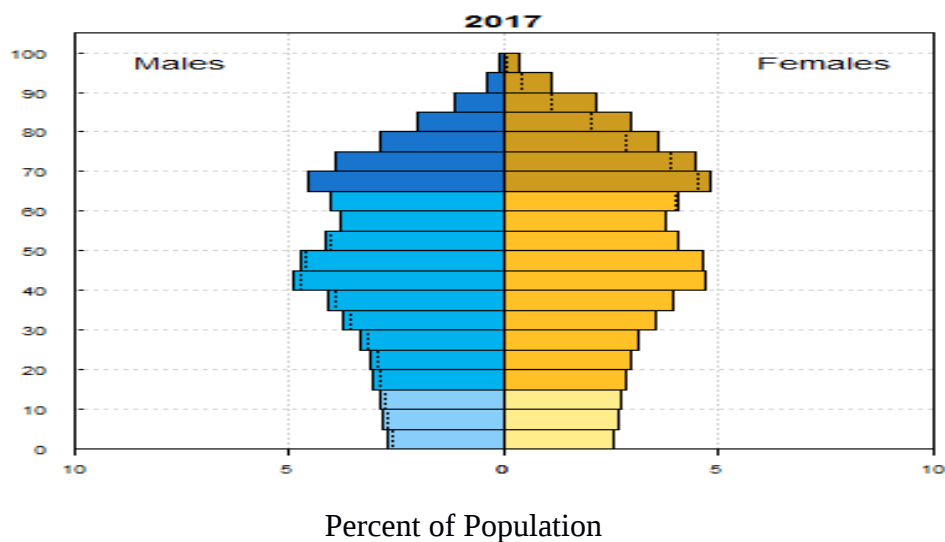


Fig No: 4 The dotted line indicates the excess male or female population in certain age groups. Th data are in thousands or millions.

Source: United Nations, Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision

Causes of population decline

The size and demographics of the population change when:

- Fewer children are born;
- Families with children move to larger towns and cities;
- Young and better-educated people move to larger towns and cities.

Effects of Population Decline

When young people move to bigger towns and cities, the average age of the population in the place they leave behind automatically goes up. A community with a higher proportion of older inhabitants may be less attractive to businesses, which may additionally have difficulty finding suitable staff locally. Other effects of population decline include:

- Fewer schools, due to there being fewer children;
- Fewer new homes being built and a drop in house prices and rental because more homes are unoccupied
- Less turnover for shopkeepers and businesses;
- Fewer sports facilities;
- Fewer people going to the theatre, cinema or concerts,
- Fewer people travelling by public transport, which thus costlier to run;

Source: <https://www.government.nl/topics/population-decline/causes-and-effects-of-population-decline>

Ageing Population

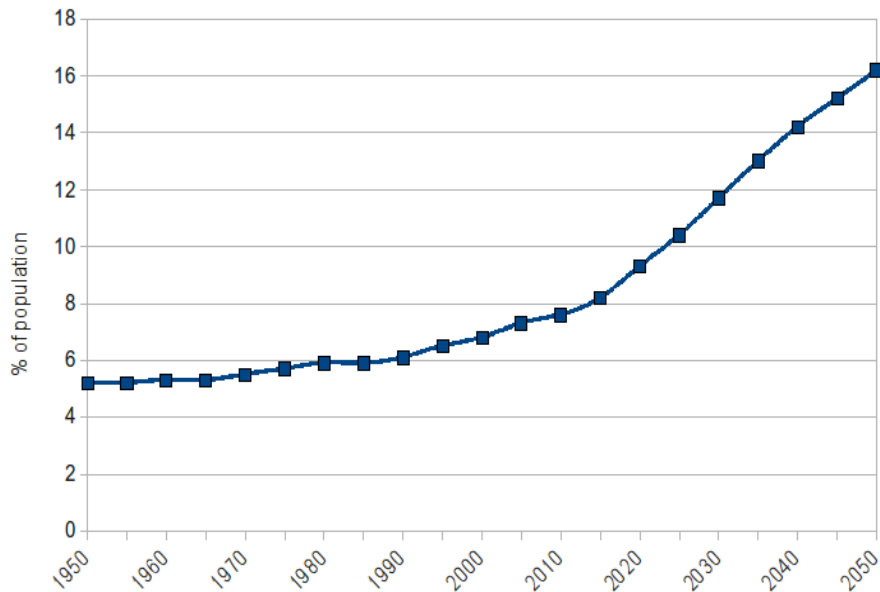
Population ageing is the process by which the share of the older population becomes Proportionally larger. This is a new phenomenon of the twentieth century. In most of the developed countries of the world, population in higher age groups has increased due to increased life expectancy. With a reduction in birth rates, the proportion of children in the population has declined.



Source: https://c1.staticflickr.com/4/3782/10137846884_f027b02097_b.jpg

Percentage of the World Population Over 65, 1950-2050

Source: UN World Population Prospect, 2008



Percentage of world population over 65

[https://en.wikipedia.org/wiki/Population_ageing#/media/File:Percentage of the World Population Over 65 - 1950-2050.png](https://en.wikipedia.org/wiki/Population_ageing#/media/File:Percentage_of_the_World_Population_Over_65_-_1950-2050.png)

5. Rural Urban Composition

The division of population into rural and urban is based on the residence. This division is necessary because rural and urban life styles differ from each other in terms of their livelihood and social conditions. The age-sex-occupational structure, density of population and level of development vary between rural and urban areas.

The criterion for differentiating rural and urban population varies from country to country. In general terms rural areas are those where people are engaged in primary activities and urban areas are those when majority of the working population is engaged in non-primary activities. People are attracted to urban areas in search of employment opportunities, better social facilities and higher standard of living. The urban population increases due to natural growth and migration of people from rural areas

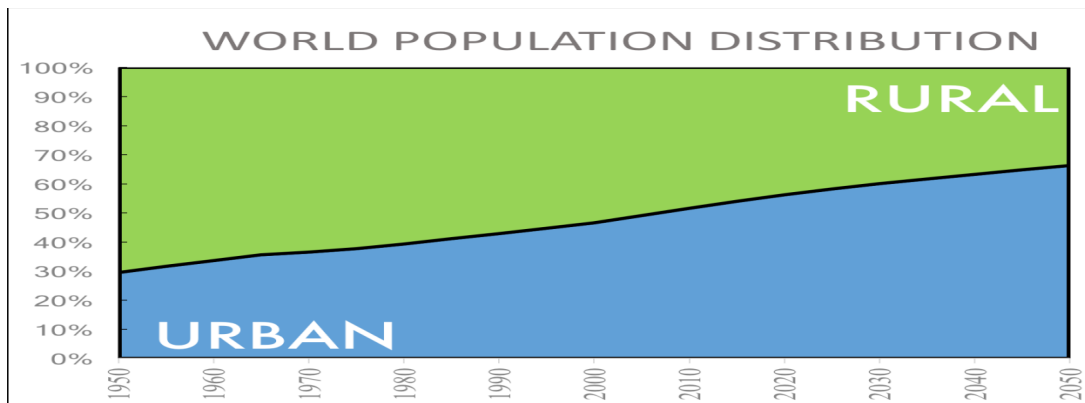


Fig No:5 Historical global trends

Source:https://upload.wikimedia.org/wikipedia/commons/b/ba/Historical_global_urban_rural_population

Criteria of labelling a settlement urban vary from one country to another. In USA, an area with a population of less than 2,500 is considered rural, while an area of more than 2,500 inhabitants is called urban. In India, all areas which are not urban are, by definition, rural. Percentage of rural population is higher in farm-based agricultural countries, while industrially regions have higher share of urban population.

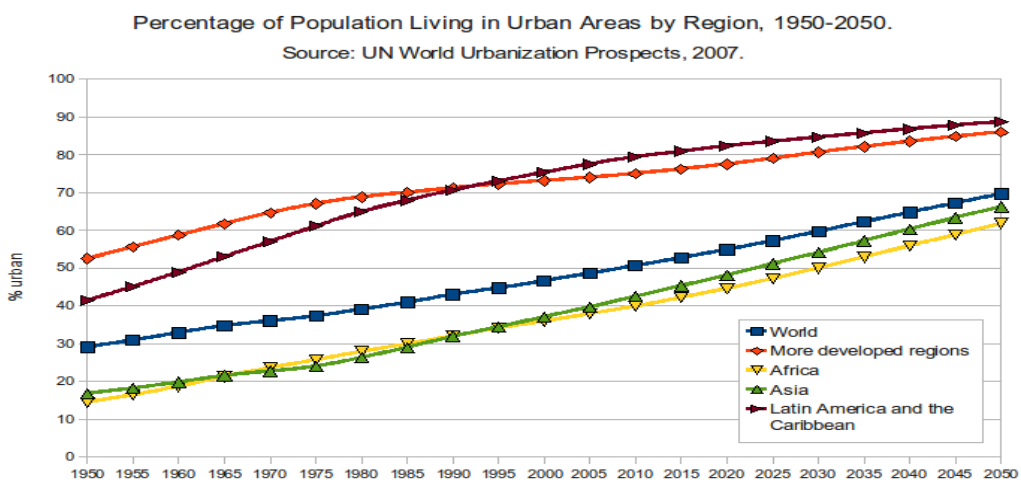


Fig No:6

[https://upload.wikimedia.org/wikipedia/commons/c/c8/Percentage_of_Population Living in urban ar](https://upload.wikimedia.org/wikipedia/commons/c/c8/Percentage_of_Population_Living_in_urban_ar)

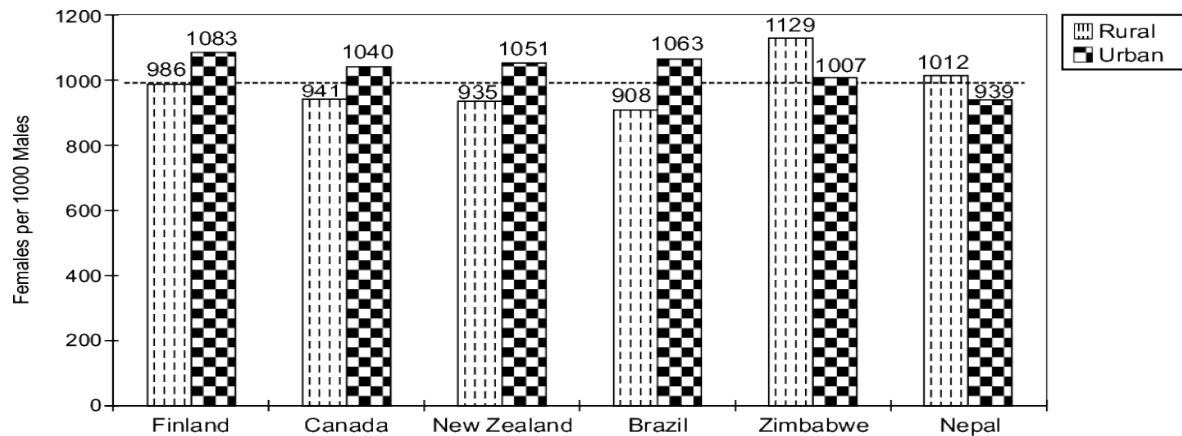


Fig No:6 Rural Urban Sex Composition (2003)

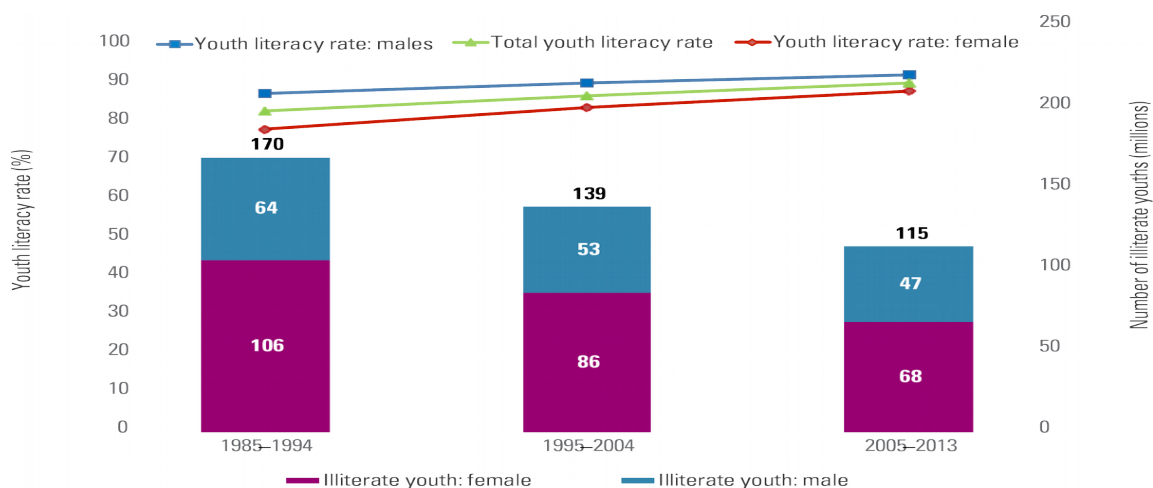
Above Fig, shows rural urban sex composition of selected countries. The rural and urban differences in sex ratio in Canada and West European countries like Finland are just the opposite of those in African and Asian countries like Zimbabwe and Nepal respectively. In Western countries, males outnumber females in rural areas and females outnumber the males in urban areas. In countries like Nepal, Pakistan and India the case is reverse. The excess of females in urban areas of U.S.A., Canada and Europe is the result of influx of females from rural areas to avail of the vast job opportunities. Farming in these developed countries is also highly mechanised and remains largely a male occupation. By contrast the sex ratio in Asian urban areas remains male dominated due to the predominance of male migration. It is also worth noting that in countries like India, female participation in farming activity in rural area is fairly high. Shortage of housing, high cost of living, paucity of job opportunities and lack of security in cities, discourage women to migrate from rural to urban areas.

6. Literacy

Literacy is that qualitative attribute of population which is a fairly reliable index of the socio-economic development of an area. It reflects that social aspect of population by which its quality can be ascertained. There is a wide variation over the world in the *literacy rates* which denotes the percentage of people age-group 15 and above who can, with understanding, both read and write a short, simple statement in their everyday life. Major factors affecting this rate are levels of economic development, urbanisation and standard of living, social status of females, availability of educational facilities and the policies of the government. Level of economic development is both a cause and a consequence of literacy. In India – literacy rate denotes the percentage of population above 7 years of age, who is able to read, write and have the ability to do arithmetic calculations with understanding.

Literacy rates among youth (aged 15 to 24) and adults are the test of an educational system, and the overall trend is positive, thanks to the expansion of educational opportunities. Globally, the youth literacy rate increased from 83 per cent to 91 per cent over two decades, while the number of illiterate youth declined from 170 million to 115 million. Regional and gender disparities persist, however. Literacy is lowest in least developed countries and higher among males than females. In the most recent years for which data are available, young women accounted for 59 per cent of the total illiterate youth population.

About 60 per cent of the countries and areas for which data are available have eradicated or nearly eradicated illiteracy among youth. In several countries in West and Central Africa, however, youth literacy rates remain less than 50 per cent. These are countries that have struggled to increase school enrolment at both primary and secondary levels. However, even when universal primary education is within reach, some countries, such as Malawi and Zambia, show low youth literacy rates. This suggests that enrolment as well as retention in school is important, as is the quality of education.



Source : <https://data.unicef.org/topic/education/literacy/>

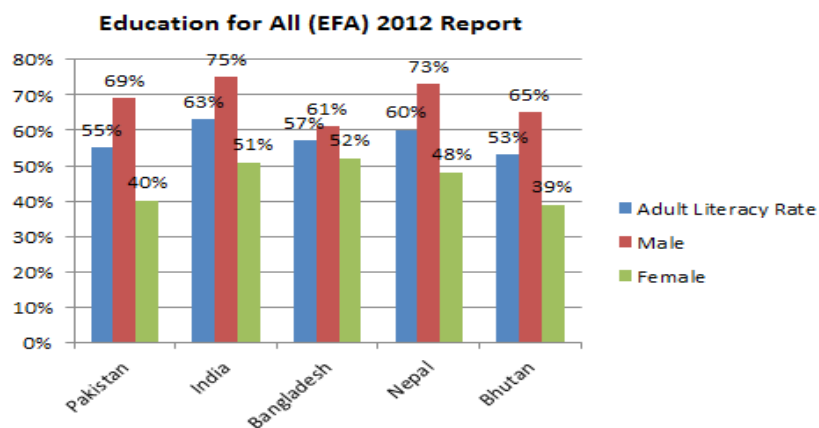


Fig No:7 Adult Literacy Rate EFA 2012

https://upload.wikimedia.org/wikipedia/commons/4/4d/Adult_Literacy_Rate_EFA_2012.png

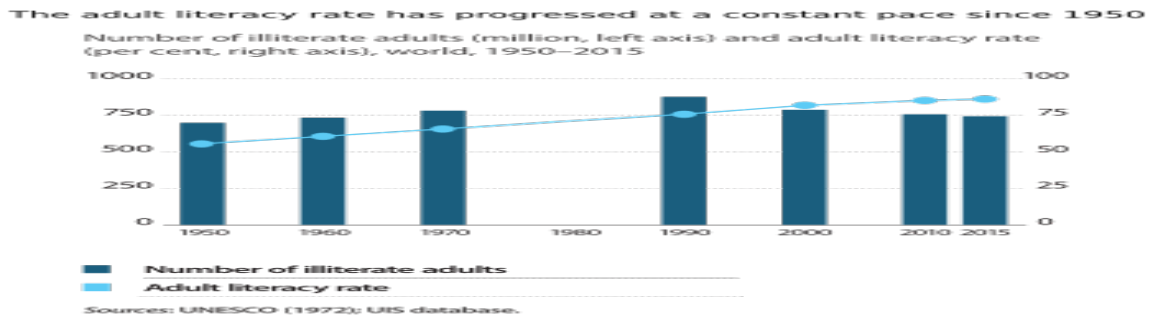


Fig No:7 Adult Literacy rates since 1950

https://upload.wikimedia.org/wikipedia/commons/thumb/2/2c/Figure_1_Adult_literacy_rates_have_increased_Reading_the_past_writing_the_futureUPDATED.svg/365px-Figure_1_Adult_literacy_rates_have_increased_Reading_the_past_writing_the_futureUPDATED.svg.png

7. Occupational Structure

The economically active section of any population is generally, defined as 'those who are engaged in remunerative occupation and who seek a livelihood in such occupations'. Children below working age, old people, retired persons, housewives and students, who are not engaged in economic pursuits for their livelihood, are excluded from the 'active' population. The proportional distribution of this active population under specific economic activities is known as occupational structure. The United Nations has identified the following categories of occupations: agriculture, forestry, hunting and fishing; mining and quarrying; manufacturing industry; construction; electricity, gas, water and health services; commerce; transport, storage and communication services; unclassified occupations.

The working population (i.e. women and men of the age group – 15 to 59) take part in various occupations ranging from agriculture, forestry fishing, manufacturing construction, commercial transport, services, communication and other unclassified services. Agriculture, forestry, fishing and mining are classified as primary activities manufacturing as secondary, transport, communication and other services as tertiary and the jobs related to research and developing ideas as quaternary activities. The proportion of working population engaged in these four sectors is a good indicator of the levels of economic development of a nation. This is because only a developed economy with industries and infrastructure can accommodate

more workers in the secondary, tertiary and quaternary sector. If the economy is still in the primitive stages, then the proportion of people engaged in primary activities would be high as it involves extraction of natural resources.

The proportions of working population engaged in these activities vary significantly among different countries depending upon their levels of economic development. The proportion of working population is very high in primary activities, if the economy is less developed. As it moves forward, the proportion in secondary and then in tertiary increased gradually. In highly industrialised countries, the proportion of people employed in tertiary sector is more than 70 per cent.