

Chapter 7: Population

GSEB Class 12 Economics — Complete Board Exam Notes

INTRODUCTION

The world population has crossed 7 billion mark and India's population has reached 1.25 billion. The basic responsibility of every Government is to fulfil the basic requirements of its growing population. Rise in population is the root cause of most of the problems in an economy. Two aspects: (1) As population increases, limited natural resources deplete fast — dangerous for future generations. (2) When unskilled population rises, natural resources will not be utilised in the best possible manner — a barrier for economic development.

7.1 MEANING OF POPULATION EXPLOSION

India's death-rate has fallen rapidly and as against it, birth-rate has not fallen to that extent, which has resulted in rise in net population — known as **population explosion**.

Between 1931 and 2011, there has been a continuous rise in population. In 1951, population of India was 36.1 crores which increased to 121.02 crores in 2011 — i.e., in 60 years population increased by 84.92 crores and average rate of growth was around 2.5 percent. Very high rise in population after 1970 is identified as population explosion.

7.2 POPULATION TRENDS IN INDIA

Trends of population in India includes: size of population, population growth rate, birth-rate, death-rate, rural-urban population, proportion of female to male population etc. The very first population census was conducted in **1871 owing to the initiative of Jamshedji Tata**. After that, a systematic census was conducted in 1891 and thereafter it has been conducted every 10 years. **The first census of independent India was conducted in 1951.**

7.2.1 Size and Growth Rate of India's Population (Table 7.1)

Year	Population (In crores)	Avg Yearly Growth Rate (%)
1901	23.8	+0.08
1911	25.2	+0.57
1921	25.1	−0.03
1931	27.9	+1.04
1941	31.9	+1.33
1951	36.1	+1.25
1961	43.9	+1.96
1971	54.8	+2.20
1981	68.3	+2.22
1991	84.6	+2.16

Year	Population (In crores)	Avg Yearly Growth Rate (%)
2001	102.7	+1.97
2011	121.02	+1.64

Table 7.1 — Source: Census of India, 2011

Analysis or Conclusions:

- Between 1901 and 1921, rate of growth was slow. In decade 1911-1921, there was a decrease of -0.03 — main reason: high death-rate. Frequent famines led to diseases like Cholera, Plague, Tuberculosis, Malaria and Influenza.
- **Year 1921 = "Year of Great Divide"** — except for 1921, rate of population growth was high in all years. After 1921, in every decade the population growth-rate has been high.
- In 1951, planning started in India: population was 36.1 crores which rose to 102.7 crores after 5 decades in 2001 — registered growth of 66.6 crores.
- In present times, population of India increases by **170 lakhs (1.70 crore) every year**. Every year, an Australia is added to India's population.
- **China is the most populated country of the world while India ranks second**. In 1911, India's population was 25.2 crores and within one century, in 2011 it rose to 121.02 crores.
- According to Census 2011, between 2011 and 2025, the estimated population growth in India will be 139.98 crores.

7.2.2 Male and Female Population in India (Table 7.2)

Year	Male Population (crores / %)	Female Population (crores / %)	Total Population (crores)
1951	18.55 (51.37%)	17.56 (48.63%)	36.11 (100%)
1991	43.92 (51.90%)	40.71 (48.10%)	84.63 (100%)
2011	62.37 (51.54%)	58.65 (48.46%)	121.02 (100%)

Table 7.2 — Source: Census of India 2011

Conclusions: Male % rose from 51.37% (1951) to 51.54% (2011) — a 0.17% rise. Female % decreased from 48.63% to 48.46% — a -0.17% decrease. Decreasing ratio of female population is a matter of concern — a challenge for the future of society.

7.2.3 Gender Ratio in India (Table 7.3)

The number of females in the country per 1000 males is identified as **Sex ratio or Gender ratio**. In India, with the exception of Kerala, all other states have low female-male ratio. According to 2011 data: Kerala had **1084 females per 1000 males** (highest). Haryana had **879** (lowest).

Year	Gender Ratio — India (Females per 1000 Males)	Gender Ratio — Gujarat
1901	972	954
1931	950	945
1961	941	940
1991	927	936

Year	Gender Ratio — India (Females per 1000 Males)	Gender Ratio — Gujarat
2001	933	921
2011	940	918

Table 7.3 — Source: Census of India 2011

Conclusions: From 1901 to 1991 female population per 1000 males was decreasing. But 2001 to 2011 saw a slight increase (933→940) thanks to "Beti Bachao" programme. Gujarat shows a consistent fall from 954 (1901) to 918 (2011) — creates social and cultural implications. Preference for male child and improvement in medical science has encouraged female foeticide. Government has imposed ban on sex detection legally.

7.2.4 Age-Wise Population of India (Table 7.4)

Age Group (years)	2005 (%)	2010 (%)	2011 (%)	*2014 est. (%)
0-14 (Children)	32.78	30.89	30.5	29.21
15-64 (Working)	62.44	63.99	64.3	65.30
65+ (Elderly)	04.78	05.12	05.2	5.49

Table 7.4 — Source: Census of India 2011, *estimated

Conclusions: (1) 0-14 age group decreased from 32.78% (2005) to 29.21% (2014) — shows decrease in birth-rate. (2) 15-64 working population increased from 62.44% to 65.30% — increase in working population leads to economic development. This is significant. (3) Changes in death-rate and fertility rate influence age-wise classification which will affect family size and labour market.

7.2.5 Rural and Urban Population in India (Table 7.5)

Year	Rural Population (crores / %)	Urban Population (crores / %)	Total (crores)
1901	21.2 (89.1%)	2.6 (10.9%)	23.8
1951	29.9 (82.8%)	6.2 (17.2%)	36.1
1981	52.4 (76.72%)	15.9 (23.28%)	68.3
2011	83.02 (68.0%)	38.0 (32.0%)	121.02

Table 7.5 — Source: Census of India, 2011

Conclusions: Rural % fell from 89.1% (1901) to 68% (2011) due to lack of employment and widespread disguised/under-employment in rural sectors — large scale migration to urban areas. Urban % rose from 10.9% (1901) to 32% (2011) due to availability of electricity, schools, colleges, hospitals, housing, good roads, transportation, communication, cultural facilities. Abolition of Zamindari system and control of money lenders on business also contributed to migration.

7.3 CAUSES OF RAPID INCREASE IN POPULATION

There are two factors affecting increase in population: **Birth-rate** and **Death-rate**. High birth-rate and low death-rate has led to population increase.

7.3.1 Meaning of Birth-rate

Birth-rate depicts the number of children born for every 1000 people during a given year.

$$\text{Birth-rate} = (\text{Number of live-births during a given year} / \text{Total population}) \times 1000$$

Year	Birth-rate (per 1000 persons)
1951	39.9
2011	21.8

Table 7.6 — Source: Census of India, 2011

Birth-rate in India was 39.9 (1951) which decreased to 21.8 (2011) — a difference of 18.1 — showing slow reduction. Main reasons for still high birth-rate: low level of education, preference for male child, low income levels.

7.3.2 Meaning of Death-rate

Death rate depicts the number of people who die per every 1000 people during a given year.

$$\text{Death-rate} = (\text{No. of people who die in a given year} / \text{Total population}) \times 1000$$

Year	Death-rate (per 1000 persons)
1951	27.4
2011	07.1

Table 7.7 — Source: Census of India, 2011

Death-rate fell from 27.4 (1951) to 7.1 (2011) — a difference of 20.3. The fall in death-rate is MUCH higher than the fall in birth-rate. Main causes for fall in death-rate: control of famines, improvement in quality of life, nutritious food, increase and improvement in medical services, spread of education, improvement in medical science and research, control of infectious diseases.

7.3.3 Causes of High Birth-rate

7.3.3.1 Social Factors:

(1) Universality of Marriage:

In India marriage is a religious ritual. Society doubts an unmarried person. Even disabled people are not exceptions. Compared to advanced countries, in India most women marry. This universality of marriage leads to high birth-rate.

(2) Early Marriage and Widow Remarriage:

Child marriage is prevalent in many parts despite laws banning it. Early marriage → long fertility span → more children. Widow remarriage is supported and has become common → high birth-rate.

(3) Preference for a Male Child:

Indian society is male dominated. More importance is given to sons for three reasons: (1) Belief about "poo" hell — a son's birth can stop them from reaching this hell. (2) For procreation. (3) To support them financially during old age. Due to these three reasons, families give birth to more children expecting a son — family size becomes large.

(4) Joint Family System:

Prevalence of joint family system in rural areas of India. Financial responsibility of upbringing a child is distributed among all family members — hence a child does not become a burden — leading to high birth-rate.

7.3.3.2 Economic Factors:

(1) Low Level of Education:

Education and population growth have inverse relationship. Inadequate education makes it difficult to understand the need for small families. Women who have had primary education gives birth to fewer children than illiterate women. Birth-rate is high because of illiteracy and low education.

(2) Low Level of Income:

When income level of a family is low, the birth of a child is considered an asset rather than a burden ("more the merrier"). Children are expected to contribute to family income in future. Even today we see children working in small eateries or tea stalls.

(3) High Infant Mortality Rate:

"Out of every 1000 children born in a given year, the number of child deaths before one year of age is known as infant mortality rate."

Year	Infant Mortality Rate (per 1000 live births)
1951	146
2011	41.40

Table 7.8 — Source: www.data.worldbank.org

IMR still quite high in India. Main reasons: poverty, less care given to girl child, lack of nutritious food, frequent abortions among women, age-old practices in upbringing of child, inadequate medical facilities, less gap between two children. Due to high IMR, families give birth to more children to ensure at least one survives — leading to high birth-rate.

7.3.3.3 Other Factors:

(1) High Fertility Rate:

In a given year, out of every 1000 females in the age group of 15-49 years, how many live children are given birth — is known as fertility rate. In 1961, average women in this age group gave birth to 6 children, fell to 3 in 2011. Still high due to: (a) Early marriage → longer fertility period. (b) Very low proportion of unmarried women in the fertile age group.

(2) Lack of Family Planning Information:

Family planning refers to decisions on the size of family and maintaining gap between two children based on proper understanding — a planned parenthood. In India, poverty, social customs and religious beliefs combined with low level of education has acted as obstacles to family planning. Moreover, lack of knowledge regarding instruments of contraception and sometimes scarcity of those leads to high birth-rate.

7.3.4 Causes of Low Death-rate:

7.3.4.1 Improvement in Standard of Living:

Standard of living of the people has improved because of the rise in income of the people due to economic development. People have started getting better quality food grains, better housing, health care and education — leading to decrease in death-rate.

7.3.4.2 Control Over Epidemics:

In the beginning of 20th century, life threatening diseases like Plague, Measles, Tuberculosis, Malaria etc. raised the death-rate. But at the end of 20th century, development resulted in extraordinary progress and innovation of varied immunization vaccines — successfully controlling these diseases and death-rate.

7.3.4.3 Control on Drought:

Science and technology led to control over drought. Deaths caused by hunger could be stopped. Considerable increase in supply of food grains was registered after 1966 when green revolution was introduced. Food grains can be easily transported from abundant areas to scarce areas — preventing starvation related deaths.

7.3.4.4 Protection against Natural Calamities and Transportation Facilities:

Earlier natural calamities like earthquake, Tsunami, landslides, floods, famines led to high death-rate. If such calamities occur now in any part of the country, immediate relief can be made available by enabling the availability of basic requirements like food grains, medicines etc. — thereby reducing death-rate.

7.4 MEASURES TO CONTROL POPULATION

7.4.1 Mass Education and Awareness:

It is necessary to make people realise the importance of small families and to reduce birth-rate. Propagate and spread education, specially making society aware through various programmes, visual media, expert lectures, plays, mimes, songs etc. In the year 2000 population policy, emphasis was placed on women upliftment. Demographers believe education is the best method for population control.

7.4.2 Effectiveness of Family Planning Programme:

To make family planning programme more effective, alongside public awareness, family planning services and incentives were increased. Simple, easy and affordable availability of contraceptives is essential. In the population policy of 2000, changes were made — reducing importance of sterilisation and emphasis was placed on preventing unwanted pregnancy through preventive methods.

7.4.3 Increasing the Age of Marriage and Raising the Status of Women:

By raising the legal age of marriage particularly for women, reduction in birth-rate can be achieved. As per the population policy of 2000, encouragement was given to raising the age of marriage for women from 18 to 20 years if possible. If women's status is raised in society and equal opportunities are given in matters of education and employment, such women will control the family size.

7.4.4 Incentives and Disincentives:

Incentives and disincentives offered by the Government play a very important role in family planning. For instance, those couples who undergo sterilisation are given financial compensation by the Government. China has adopted disincentives — number of facilities are withdrawn from those couples who have two or more children. In India, in elections of local self government, couple with more than two children cannot contest in elections.

7.4.5 Expansion in Medical Services and its Growing Effectiveness:

In India death-rate has come down but it is still higher than some developed countries. With the help of science, there has been an increase in the services and facilities for child birth and health of the new born. Universalisation and effectiveness of vaccination, awareness regarding communicable diseases like AIDS, reduction in various infectious diseases and sex related diseases can bring about a reduction in death-rate and infant mortality rate. India was the **first country in the world to introduce population policy**. A committee was set up to frame New Population Policy of 2000 under the Chairmanship of **Dr. M.S. Swaminathan**.

EXERCISE — MCQs

(1) Who was responsible for the introduction of population census for the first time in India?

Options: (a) Jamshedji Tata (b) Swaminathan (c) Deendayal Upadhyay (d) Dadabhai Naoroji

✓ **Answer: (a) Jamshedji Tata — first population census in India was conducted in 1871 owing to the initiative of Jamshedji Tata.**

(2) What is the estimated population of India between 2011-2025?

Options: (a) 155 crores (b) 130 crores (c) 139.98 crores (d) 180 crores

✓ **Answer: (c) 139.98 crores**

(3) In which year the first population census was undertaken in India?

Options: (a) 1901 (b) 1951 (c) 1871 (d) 1921

✓ **Answer: (c) 1871 — first census was conducted in 1871; first census of independent India was in 1951.**

(4) How much was India's population in 1901?

Options: (a) 22.2 crores (b) 25.2 crores (c) 102.7 crores (d) 23.8 crores

✓ **Answer: (d) 23.8 crores**

(5) How much was India's population in the year 2011?

Options: (a) 36.1 crores (b) 54.8 crores (c) 121.02 crores (d) 23.8 crores

✓ **Answer: (c) 121.02 crores**

(6) In which year was planning started in India?

Options: (a) 1901 (b) 1951 (c) 1950 (d) 2000

✓ **Answer: (b) 1951**

(7) Which country in the world has the largest population?

Options: (a) China (b) India (c) Australia (d) America

✓ **Answer: (a) China — China is most populated; India is second.**

(8) Which state in India has the highest female population per 1000 males?

Options: (a) Gujarat (b) Maharashtra (c) Kerala (d) Uttar Pradesh

✓ **Answer: (c) Kerala — 1084 females per 1000 males (Census 2011).**

(9) How much was the female population per 1000 male population in India in 2011?

Options: (a) 930 (b) 950 (c) 940 (d) 970

✓ **Answer: (c) 940**

(10) What was India's birth-rate in 2011?

Options: (a) 21.8 (b) 36.8 (c) 72.0 (d) 23.8

✓ **Answer: (a) 21.8**

Key One-Line Answers

(1) What has been the basic cause for all the problems?

Rise in population is the root cause of most of the problems in an economy.

(2) What is working and non-working population?

Working population = People in age group 15-64 who contribute to economic production. Non-working population = Those who do not contribute to productive activities — e.g., women, children, old people.

(3) What was the population growth rate in 2011?

+1.64% average yearly growth rate in 2011.

(4) Where does India stand in the world population order?

India ranks SECOND in world population. China is first.

(5) What was the female population per 1000 males in Gujarat in 2011?

918 females per 1000 males in Gujarat in 2011 (Census 2011).

(6) Why is the year 1921 identified as the year of "great divide"?

In 1921, population growth rate was -0.03 (negative/zero) due to high death rate from famines and diseases. After 1921, in every decade the population growth-rate has been consistently high. So 1921 is called the 'year of great divide'.

(7) What was India's death-rate in 1951 and 2011?

Death-rate in 1951 was 27.4 per 1000 persons. In 2011 it fell to 7.1 per 1000 persons. Fall = 20.3 points (much larger than fall in birth-rate).

■ BOARD EXAM QUICK REVISION — CHAPTER 7: POPULATION

1. First population census in India = 1871 (by Jamshedji Tata). First census of independent India = 1951. Census every 10 years.

2. Year of Great Divide = 1921 — only year when population growth was NEGATIVE (−0.03). After 1921, consistent high growth.

3. India's population: 1901 = 23.8 crores | 1951 = 36.1 crores | 2011 = 121.02 crores. Estimated 2025 = 139.98 crores.

4. India adds 1.70 crore people every year — equal to Australia's total population. India is SECOND most populated (China is first).

5. Birth-rate = $(\text{Live births} / \text{Total population}) \times 1000$. India: 1951 = 39.9, 2011 = 21.8.

6. Death-rate = $(\text{Deaths} / \text{Total population}) \times 1000$. India: 1951 = 27.4, 2011 = 7.1. Fall in death rate (20.3) > Fall in birth rate (18.1) → population explosion.

7. IMR: 1951 = 146, 2011 = 41.40. Still high — main causes: poverty, malnutrition, age-old practices.

8. Gender Ratio 2011: India = 940 females/1000 males. Kerala = 1084 (highest). Haryana = 879 (lowest). Gujarat = 918.

9. Age-wise (2011): 0-14 = 30.5% | 15-64 (working) = 64.3% | 65+ = 5.2%. Working population rising = positive for economy.

10. Rural-Urban 2011: Rural = 68% | Urban = 32%. Urban population rising due to migration and industrialization.

11. CAUSES OF HIGH BIRTH-RATE — Social: Universality of Marriage, Early Marriage, Male Child Preference, Joint Family. Economic: Low Education, Low Income, High IMR. Other: High Fertility Rate, No Family Planning Info.

12. CAUSES OF LOW DEATH-RATE: Improved standard of living, Control over epidemics (vaccines), Control on drought (Green Revolution 1966), Protection against natural calamities and transportation.

13. MEASURES TO CONTROL POPULATION (5): Mass Education | Family Planning | Increase Age of Marriage + Women Status | Incentives/Disincentives | Expansion of Medical Services.

14. India was FIRST country in world to introduce population policy. New Population Policy 2000 under Dr. M.S. Swaminathan.

15. Fertility Rate: 1961 = 6 children/woman; 2011 = 3 children/woman.