

## **Lecture 19: Trends in Death and Birth Rates**

### **Slide 1**

Rise and fall in the growth rate of India is the result of systematic changes in death and birth rates from high levels to moderate levels. In the beginning of the last century death and birth rate of India were in the vicinity of 50 per thousand (Sharma, 1996). Death rate declined to 31 during 1931-41 and to 15 in 1971-81. After that due to socio-economic development and efforts made by Government of India to provide health facilities to its population, mortality rate started declining. By 2008 the death rate of India has come down to 7.4. Life expectancy which was around 20 in the beginning of the century rose to 31 in 1971-81 and 50 in 1971-81. At present the life expectancy is above 64 for males and above 66 for females. However, birth rate remained above 40 till 1971. Birth rate started declining only during 1971-81. It has come down to 22.8 and there is evidence that it will decline further. In the future, since life expectancy has already reached 65 it will be more and more difficult to improve it further, though there is lot of scope for this (Box 6.1). India's life expectancy is 10-15 years lower than that of the industrially advanced countries. The fertility will decline and, therefore, the growth rate of population is likely to decline further.

There is one more reason why the growth rate will decline further. That is the effect of age distribution, called population momentum. It can be shown that the decline in average fertility does not immediately affect the growth rate of population. If a high fertility country achieves a total fertility rate of 2.1 its growth rate will not become zero immediately. It will take a few decades for the population to stabilize because in the meantime more and more people will enter reproductive ages and produce their first and second child. When fertility was high nearly 40 percent population of India was below the age of 14 years. With decline of fertility this percentage has come down but the number of children is still very large. As time passes they will grow, enter the reproductive period, marry and produce children. Therefore, the country will continue to have positive growth rate for several decades. In the Tenth Five Year Plan it was estimated that the contribution of age distribution to growth of India's population is about 60 percent.

## Slide 2

### BOX 6.1: EXCERPT FROM ELEVENTH FIVE YEAR PLAN, VOL. 2: 57

Considerable achievements have been made over the last six decades in our efforts to improve health standards, such as life expectancy, child mortality, infant mortality, and maternal mortality. Small pox and guinea worm have been eradicated and there is hope that poliomyelitis will be contained in the near future. Nevertheless, problems abound. Malnutrition affects a large proportion of children. An unacceptably high proportion of the population continues to suffer and die from new diseases that are emerging; apart from continuing and new threats posed by the existing ones. Pregnancy and childbirth related complications also contribute to the suffering and mortality.

## REGIONAL DIVERSITY

Table 6.7 presents the SRS estimates of death rates, birth rates and natural growth rates for different states of India, separately for rural and urban areas, for the year 2008. It also presents the estimates of infant mortality rates for different states. Natural growth rate is simply the difference between birth and death rates. The table clearly demonstrates that there is a large variation in birth rate in different States of India. Variations in death rates are comparatively small. The table also shows that there are significant variations in birth and death rates by urban-rural residence. As a rule urban areas have lower birth rates as well as death rates. Yet, since the urban-rural difference in birth rates is larger than in death rates, urban areas show a lower rate of natural growth than rural areas. Uttar Pradesh, Madhya Pradesh, Chhattisgarh and Orissa have a high death rate. Normally the States which have high death rate also have high birth rate but there are exceptions: Orissa has low birth rate but high death rate; Bihar has high birth rate but relatively low death rate. Orissa has the highest value of infant mortality rate. One may say that differences in Indian States analogous to the differences in the world regions. **Demographically, Kerala constitutes the Europe of India; Orissa, Uttar Pradesh and Bihar constitute the Africa of India.** There is a need to fight the spatial differences in demographics. The political unity of India will depend heavily on the extent to which we can curtail the demographic diversity between different States and Union Territories.

Slide 3

**TABLE 6.7: BIRTH AND DEATH RATE, INDIA 2008**

India/States/ Union Territories	Birth rate			Death rate			Natural growth rate			Infant mortality rate		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>India</b>	<b>22.8</b>	<b>24.4</b>	<b>18.5</b>	<b>7.4</b>	<b>8.0</b>	<b>5.9</b>	<b>15.4</b>	<b>16.5</b>	<b>12.6</b>	<b>53</b>	<b>58</b>	<b>36</b>
<b>Bigger states</b>												
1. Andhra Pradesh	18.4	19.1	16.8	7.5	8.3	5.7	10.9	10.8	11.1	52	58	36
2. Assam	23.9	25.3	15.7	8.6	9.0	5.6	15.4	16.2	10.1	64	66	39
3. Bihar	28.9	29.7	22.5	7.3	7.4	6.0	21.6	22.3	16.5	56	57	42
4. Chhattisgarh	26.1	27.6	19.3	8.1	8.5	6.4	18.0	19.2	12.9	57	59	48
5. Delhi	18.4	20.2	18.1	4.8	5.1	4.7	13.6	15.1	13.4	35	40	34
6. Gujarat	22.6	24.1	20.3	6.9	8.0	5.4	15.7	16.1	14.9	50	58	35
7. Haryana	23.0	24.2	20.4	6.9	7.3	5.9	16.1	16.8	14.5	54	58	43
8. Jammu & Kashmir	18.8	20.2	14.0	5.8	6.0	4.9	13.1	14.2	9.1	49	51	37
9. Jharkhand	25.8	27.5	18.9	7.1	7.5	5.2	18.7	19.9	13.7	46	49	32
10. Karnataka	19.8	20.9	17.9	7.4	8.5	5.5	12.4	12.4	12.4	45	50	33
11. Kerala	14.6	14.6	14.6	6.6	6.7	6.4	8.0	7.9	8.2	12	12	10
12. Madhya Pradesh	28.0	30.0	21.1	8.6	9.4	6.0	19.4	20.7	15.1	70	75	48
13. Maharashtra	17.9	18.4	17.2	6.6	7.4	5.6	11.3	11.0	11.6	33	40	23
14. Orissa	21.4	22.2	16.0	9.0	9.4	6.9	12.3	12.9	9.1	69	71	49
15. Punjab	17.3	18.0	16.1	7.2	8.0	6.0	10.1	10.1	10.1	41	45	33
16. Rajasthan	27.5	28.8	23.5	6.8	7.0	6.1	20.7	21.8	17.4	63	69	38
17. Tamil Nadu	16.0	16.2	15.8	7.4	8.2	6.3	8.6	8.0	9.4	31	34	28
18. Uttar Pradesh	29.1	30.0	25.1	8.4	8.8	6.6	20.7	21.2	18.4	67	70	49
19. West Bengal	17.5	19.4	12.4	6.2	6.1	6.6	11.2	13.3	5.8	35	37	29
<b>Smaller states</b>												
1. Arunachal Pradesh	21.8	23.1	15.2	5.2	5.6	3.0	16.6	17.5	12.1	32	34	19
2. Goa	13.6	13.4	13.8	6.6	8.1	5.7	7.1	5.3	8.2	10	10	11
3. Himachal Pradesh	17.7	18.2	12.1	7.4	7.7	4.7	10.3	10.6	7.4	44	45	27
4. Manipur	15.8	15.9	15.7	5.0	4.8	5.4	10.9	11.1	10.3	14	16	8
5. Meghalaya	25.2	27.3	15.6	7.9	8.4	5.4	17.3	18.9	10.2	58	60	43
6. Mizoram	17.8	22.0	13.4	5.1	5.9	4.2	12.8	16.1	9.2	37	45	24
7. Nagaland	17.5	17.8	16.4	4.6	5.0	3.3	12.9	12.9	13.0	26	25	28
8. Sikkim	18.4	18.7	16.6	5.2	5.4	3.7	13.2	13.3	12.8	33	35	19
9. Tripura	15.4	16.1	12.0	5.9	6.0	5.2	9.5	10.1	6.8	34	36	26
10. Uttarakhand	20.1	21.0	16.5	6.4	6.7	5.6	13.6	14.4	10.9	44	48	24
<b>Union Territories</b>												
1. Andaman & Nicobar Islands	16.9	16.9	17.1	4.8	5.5	3.6	12.1	11.4	13.4	31	35	23
2. Chandigarh	16.4	22.6	15.8	4.4	3.1	4.6	11.9	19.6	11.2	28	22	29
3. Dadra & Nagar Haveli	27.0	26.4	29.2	5.4	6.1	3.0	21.6	20.4	26.2	34	38	20
4. Daman & Diu	17.5	17.3	17.9	5.3	5.4	5.2	12.2	12.0	12.6	31	29	36
5. Lakshadweep	14.3	15.7	12.9	7.1	6.4	7.8	7.1	9.3	5.0	31	28	35
6. Puducherry	16.4	16.4	16.4	7.5	8.8	6.9	8.9	7.6	9.5	25	31	22

Note: Infant mortality rates for smaller States and Union Territories are based on three-years period 2006-08.

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## Slide 4

### IMPLICATIONS OF HIGH GROWTH RATE

We have seen that after independence population of India grew at a rate of more than 2 percent a year. This had serious implications for Indian society. The issue to what extent high population growth rate hampered development is controversial and can never be settled. Development is influenced by ethical and ideological factors, resources, and state policies. Those who claim that population growth is bad for development they may argue as follows: if the national income (total value of goods and services produced in a country) grows at 2.5 percent a year and the population also grows at the same rate, in terms of income per capita the country will remain where it is. In crude terms just to maintain the same level of standard, education, jobs, housing and health facilities the country must grow at 2.5 percent level. Assuming a capital-output ratio of 4 it means that a country must invest 10 percent of national income to achieve this. It is not easy for a poor and backward country to save 10 percent for investment but this has to be done, and without any promise in the near future. Even a good growth of say 5 percent a year, requiring 20 percent investment, would result in a very slow improvement in the economic standards. This is one of the reasons why in the post-independence period India experienced a ***Hindu growth rate*** (i.e., a nearly stable and low growth rate).

Others may argue that population is a resource. In the long run a higher population is better than the lower population. Children born today will start contributing to production nearly 21 years from now. If they are provided education and other productive resources, more number will mean more development. It is only in the short run, up to next 20 years, that population growth may adversely affect development. Even here one may say that higher family size may force people to work more and, therefore, contribute to economic development.

## Slide 5

India has had ambitious economic plans and declarations on the part of political leaders that India is fast catching up with the West. This created fast rising aspirations among the masses. The country has also made progress on many fronts. It has made progress by large investments (not always fair for a poor country) partly by internal mobilization and partly by borrowings and, yet, the reality is that it's not possible for India to catch up with the Western countries. Over the years development has produced more inequalities: between regions, males and females, social classes, urban and rural areas and the rich and the poor. The gap between those working in organized sector, mostly in big cities, and those working in unorganized sector in small towns and villages. The result is the widespread discontent and anarchy.