

## Lecture 16: Demographic Transition in the Nineteenth and Twentieth Centuries

### Slide 1

To follow Wilcox (1985), “there is nothing in the history of the last few centuries more notable than the increase in the population of the world” the prime cause of which is the decrease in the ratio of deaths to population.

Thus in the second half of the eighteenth century the death rate in Europe started declining (Valentey, 1977) under the impact of both economic and political factors. First it declined at a slow rate and then at increasingly rapid rate. Since the birth rate remained high it lead to increasing rate of population growth. The birth rate fluctuated. “It reached its highest level in the period of revival after the economic crisis at the beginning of the 1870, which was to prove the most severe of the whole century. The highpoint of that climb in the birth rate was 1876, which can be regarded as the turning point in the history of the European birth rate...”

#### **BOX 5.1: WALTER WILCOX ON THE EXPANSION OF EUROPE AND ITS INFLUENCE OF POPULATION**

Europe had more than three times as many inhabitants in 1900 as in 1750.

The persons of European stock living outside of in 1900 were three fourths as many as the entire number of inhabitants of that continent in 1750.

This vast increase of Europeans by blood in 150 years from 130,000,000 to 500,000,000 has not been secured at the cost of a decrease of other human beings.

On the contrary the native stocks reached by Europeans have usually increased in numbers.

This is true of nearly all numerous groups living mainly by agriculture in the tropical or subtropical regions of America, Africa, Asia, and Malaysia.

Where the influence of Europe has not gone and we have any clue to the facts, they indicate a stationary population, or at least a very low increase.

The enormous increase in the population of the earth from perhaps 1,000,000,000 in 1750 to 1,500,000,000 in 1900 must be ascribed mainly to the expansion of Europe.

## Slide 2

Thus in the second half of the eighteenth century the world population started growing. This growth, however, was confined to developed countries. Population in the less developed countries remained almost stationary (Misra, 1995).

The world population reached the first billion mark in 1820. And after that it started growing at a faster and faster pace, first due to greater decline in death rate in the developed countries and then due to decline in death rate in the developing countries, particularly in the second half of the twentieth century. Here one may ask: which are developed and less developed countries?

United Nations has divided all countries of the world into two broad categories: more developed countries and less developed countries. Then certain less developed countries are classified as least developed countries. The classification is as follows (United Nations Population Division, 2009):

- More developed regions: They comprise all regions of Europe plus Northern America, Australia/New Zealand and Japan (see definition of regions).
- Less developed regions: They comprise all regions of Africa, Asia (excluding Japan), Latin America and the Caribbean plus Melanesia, Micronesia and Polynesia (see definition of regions).
- Least developed countries: The group of least developed countries, as defined by the United Nations General Assembly in its resolutions (59/209, 59/210 and 60/33) in 2007, comprises 49 countries, of which 33 are in Africa, 10 in Asia, 1 in Latin America and the Caribbean, and 5 in Oceania. The group includes 49 countries - Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, São Tomé and Príncipe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda,

### Slide 3

United Republic of Tanzania, Vanuatu, Yemen and Zambia. These countries are also included in the less developed regions.

Table 5.2 shows the various dates when the world population reached various billion marks. It exhibits that in the early nineteenth century population started growing. Yet, the growth rate was low. As explained above, the reason is that this growth was confined to the developed countries only which comprised one fifth of the world population. In the developing countries like India life expectancy was low and death rate was around 50. Thus despite a high fertility population was constant. World population started growing fast in the twentieth century, particularly in the second half of the twentieth century. This is the time when mortality rates declined with suddenness in the less developed countries and their fertility rates remained unchanged.

TABLE 5.2: LANDMARKS IN WORLD POPULATION HISTORY

Billion mark	Year when the billion mark was reached (AD)	Time to add one billion
1 <sup>st</sup>	1820	Cannot be estimated exactly but it is believed to have taken 5-10 lakh years
2 <sup>nd</sup>	1930	110
3 <sup>rd</sup>	1960	30
4 <sup>th</sup>	1974	14
5 <sup>th</sup>	1987	13
6 <sup>th</sup>	1999	12

#### Slide 4

Kirk (1996) said that in Europe mortality decline, the chief cause of population growth occurred in four phases. In the first phase, up to the latter part of eighteenth century some improvement in mortality may have occurred due to improvement in income but nothing is known about this period. Beginning the latter part of eighteenth century mortality started falling mainly due to public order created by the modern state. Other factors such as improvement in agriculture, improved nutrition, improved hygiene, improvement in infrastructure and means of transportation and communication, and reduction in famines and epidemics, also helped in reducing mortality levels. Yet, the improvement in mortality occurred independently of medical intervention. In the third phase, from the last third of the nineteenth century to World War I, improvement in mortality occurred due to medical discoveries, particularly due to control of diseases like diarrhoea and tuberculosis. Finally, in the fourth phase, during World War II and afterwards, discovery of penicillin and other chemicals reduced mortality due to epidemic and contagious diseases. Thus it is perhaps not correct to say that advancement in medical sciences is the major factor in improvement in mortality in the nineteenth century. This is certainly not so in the case of the developed countries.

The case of less developed countries is different. Here much of mortality decline occurred after World War II when a large number of them became independent and the national governments in the new countries took special interest in promoting health and nutrition with financial support from outside. This was the time when DDT, antibiotics and other drugs were already available in the developed countries and the less developed countries had to apply them to control infectious diseases as part of public health programme. In this period mortality improved in all less developed countries suddenly and this happened irrespective of culture, religion, level of economic development, ideology and social structure, though the positive correlation between development and life expectancy continued. This sudden decline in post-War mortality in the less developed countries caused population explosion and in several of them population was found growing at rate three percent and above.

## Slide 5

On Wednesday, 13 October 1999 BBC News announced the birth of the six billionth baby with the following photograph. UNFPA (2009) had estimated that around 12 October 1999 the sixth billionth child would be born. According to UN symbolism it was a boy born in a clinic in Sarajevo, the Bosnian capital, a city scarred by years of war, where the six billionth baby was born in UN Secretary-General Mr. Kofi Annan's presence. The UN chose as "D6B", the day when humanity passed the symbolic threshold.



**FIGURE 5.1: BIRTH OF THE SIX BILLIONTH BABY**

It cannot be said with certainty where exactly the six billionth baby was born but the event was significant. On the one hand there was something to be celebrated and on the other hand it was a moment for thinking and acting. We are reaching (or perhaps have already reached) the carrying capacity of earth and there is a need to plan for the future. There is a need to prevent the excessive growth of population in certain regions of the world and make reproduction decision a matter of choice for the couples and particularly for the women.