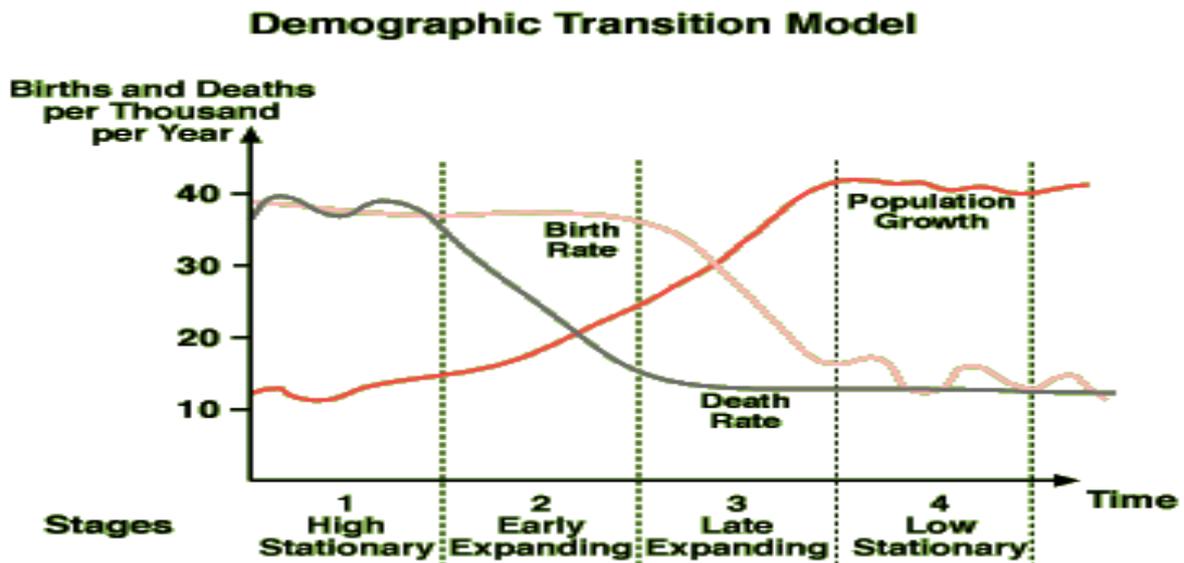


Demographic Transition Model

The changes in population growth rates and the effect on population can be shown on the Demographic Transition Model (Population Cycle) - see diagram below:



This can be divided into four stages:

Stage 1 - High Fluctuating

Birth Rate and Death rate are both high. Population growth is slow and fluctuating.

Reasons

Birth Rate is high as a result of:

- Lack of family planning
- High Infant Mortality Rate: putting babies in the 'bank'
- Need for workers in agriculture
- Religious beliefs
- Children as economic assets

Death Rate is high because of:

- High levels of disease
- Famine

- **Lack of clean water and sanitation**
- **Lack of health care**
- **War**
- **Competition for food from predators such as rats**
- **Lack of education**

Typical of Britain in the 18th century and the Least Economically Developed Countries (LEDC's) today.

Stage 2 - Early Expanding

Birth Rate remains high. Death Rate is falling. Population begins to rise steadily.

Reasons

Death Rate is falling as a result of:

- **Improved health care (e.g. Smallpox Vaccine)**
- **Improved Hygiene (Water for drinking boiled)**
- **Improved sanitation**
- **Improved food production and storage**
- **Improved transport for food**
- **Decreased Infant Mortality Rates**

Typical of Britain in 19th century; Bangladesh; Nigeria

Stage 3 - Late Expanding

Birth Rate starts to fall. Death Rate continues to fall. Population rising.

Reasons

- **Family planning available**
- **Lower Infant Mortality Rate**
- **Increased mechanization reduces need for workers**
- **Increased standard of living**
- **Changing status of women**

Typical of Britain in late 19th and early 20th century; China; Brazil

Stage 4 - Low Fluctuating

Birth Rate and Death Rate both low. Population growth is steady.

Typical of USA; Sweden; Japan; Britain

Demographic Transition Model Applied Revision Table

Types	Birth	Reasons	Death	Reasons
LEDCs (Less Economically Developed Countries)	High	<p>No contraception</p> <p>Couples have many babies to compensate for the high death rate caused by poor health care</p> <p>Large families need to work on the land to contribute to family income</p> <p>Children look after old</p> <p>Religious</p>	High	<p>Poor medical facilities</p> <p>Disease</p> <p>Poor nutrition</p> <p>High Infant mortality</p>
NICs (Newly Industrialize Countries)	High/ Decreasing	<p>People are used to having many children. Takes time for culture to change</p> <p>Changing status of women</p>	Decreasing	<p>As an economy develops money becomes available for better health care</p> <p>Housing improves</p> <p>Better childcare</p>
MEDCs (More Economically Developed Countries)	Low	<p>Children are expensive</p> <p>People know their children are going to survive so they can keep their families small</p> <p>Widely available contraceptives</p> <p>Changing status of women</p>	Low	<p>Better health care</p> <p>Better standard of living</p>

Criticism:

Like all models, the demographic transition model has its limitations. It failed to consider, or to predict, several factors and events:

1 Birth rates in several MEDCs have fallen below death rates (Germany, Sweden). This has caused, for the first time, a population decline which suggests that perhaps the model should have a fifth stage added to it.

2 The model assumes that in time all countries pass through the same four stages. It now seems unlikely; however, that many LEDCs, especially in Africa, will ever become industrialized.

3 The model assumes that the fall in the death rate in Stage 2 was the consequence of industrialization. Initially, the death rate in many British cities rose, due to the insanitary conditions which resulted from rapid urban growth, and it only began to fall after advances were made in medicine. The delayed fall in the death rate in many developing countries has been due mainly to their inability to afford medical facilities. In many countries, the fall in the birth rate in Stage 3 has been *less* rapid than the model suggests due to religious and/or political opposition to birth control (Brazil), whereas the fall was much *more* rapid, and came earlier, in China following the government-introduced 'one child policy.

The timescale of the model, especially in several South-east Asian countries such as Hong Kong and Malaysia, is being squashed as they develop at a much faster rate than did the early industrialized countries.

4 Countries that grew as a consequence of emigration from Europe (USA, Canada, Australia) did not pass through the early stages of the model.