

The theory of demographic transition

The theory of demographic transition or of population stages or of population cycle has many versions. It has been propounded by Thomson and Notestein. They explain the theory in three stages. But the two famous versions are Blacker's *five stages of population growth* which have been explained here, and Karl Sax's *four stages of population growth*, namely, High Stationary, Early Explosive Increase, Late Explosive Increase, and Low Stationary. The theory of demographic transition is based on the actual population trends of advanced countries of the world.

DTT states that every country passes through 5 different stages of population development. According to **C.P. Blacker**, they are:

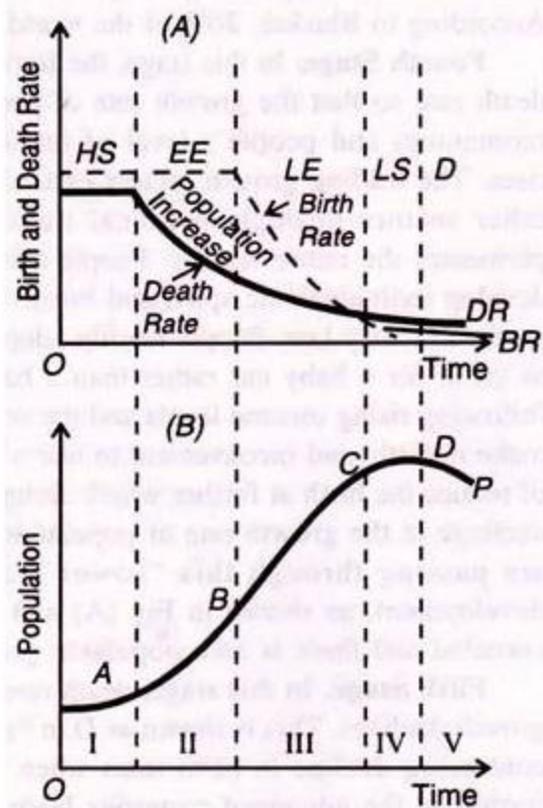
- (i) the high stationary phase marked by high fertility and mortality rates;
- (ii) the early expanding phase marked by high fertility and high but declining mortality;
- (iii) the late expanding phase with declining fertility but with mortality declining more rapidly;
- (iv) the low stationary phase with low fertility balanced by equally low mortality; and the declining phase with low mortality, lower fertility and an excess of deaths over births.

These stages are explained in the figure below. These stages are explained in the fig. A & B. In the figure, the time for different stages is taken on the horizontal axis and annual birth and death rates on the vertical axis. The curves *BR* and *DR* relate to birth rate and death rate respectively. *P* is the population curve in the lower portion of the figure.

First Stage

In this stage the country is backward and is characterised by high birth and death rates with the result that the growth rate of population is low. People mostly live in rural areas and depending on backward agriculture for their livelihood. There are a few simple, light and small consumer goods industries. The tertiary sector consisting of transport, commerce, banking and insurance is underdeveloped. All these factors are responsible for low incomes and poverty of the masses. Large family is regarded as a necessity to augment the low family income. Children are an asset to the society and parents. The existence of the joint family system provides employment to all children in keeping with their ages. More children in a family are also regarded as an insurance against old age by the parents. People being illiterate, ignorant, superstitious and fatalists are averse to any method of birth control.

All these economic and social factors are responsible for a high birth rate in the country. Along with high birth rate the death rate is also high due to non-nutritional food with a low caloric value, lack of medical facilities and the lack of any sense of cleanliness. Dirty and unhealthy living conditions, recurrent visits of famines and pestilence and an absence of proper medical care result in large deaths. The mortality rate is the highest among the children and the next among women of child-bearing age. Thus the birth rates and death rates remain approximately equal over time so that a static equilibrium with zero population growth prevails.



Second Stage

In the second stage, the economy enters the phase of economic growth. Agricultural and industrial productivity increases, and means of transport develop. There is greater mobility of labour. Education expands. Income increases. People get more and better quality food products, medical and health facilities are expanded.

Modern medicines and vaccination bring down the death rate. But the birth rate is almost stable. People do not have any inclination to reduce the birth of children because with economic growth employment opportunities increase and children are able to add more to the family income. With improvement in the standard of living and the dietary habits of the people, the life expectancy also increases. People do not make any effort to control the size of family because of the presence of religious dogmas and social taboos towards family planning. Of all the factors in economic growth it is difficult to break with the past social institutions, customs and beliefs. As a result of these factors, the birth rate remains at the previous high level. With decline in the death rate and no change in the birth rate, population increases at a rapid rate. This leads to *Population Explosion*. This is an “*Early Expanding*” (EE) stage in population development when the population growth curve is rising from A to B as shown in fig. B, with decline in death rate and no change in birth rate, as shown in the upper portion of the figure.

Third Stage

In this stage, birth rate starts declining accompanied by death rates declining rapidly. With better medical facilities, the survival rate of children increases. People are not willing to support large

families. The country is burdened with the growing population. People adopt the use of contraceptives so as to limit families. Birth rate declines initially in urban areas. With death rate declining rapidly, the population grows at a diminishing rate. This is the “*Late Expanding*” stage as shown by *LE* in fig. A and *BC* in fig. B.

Fourth Stage

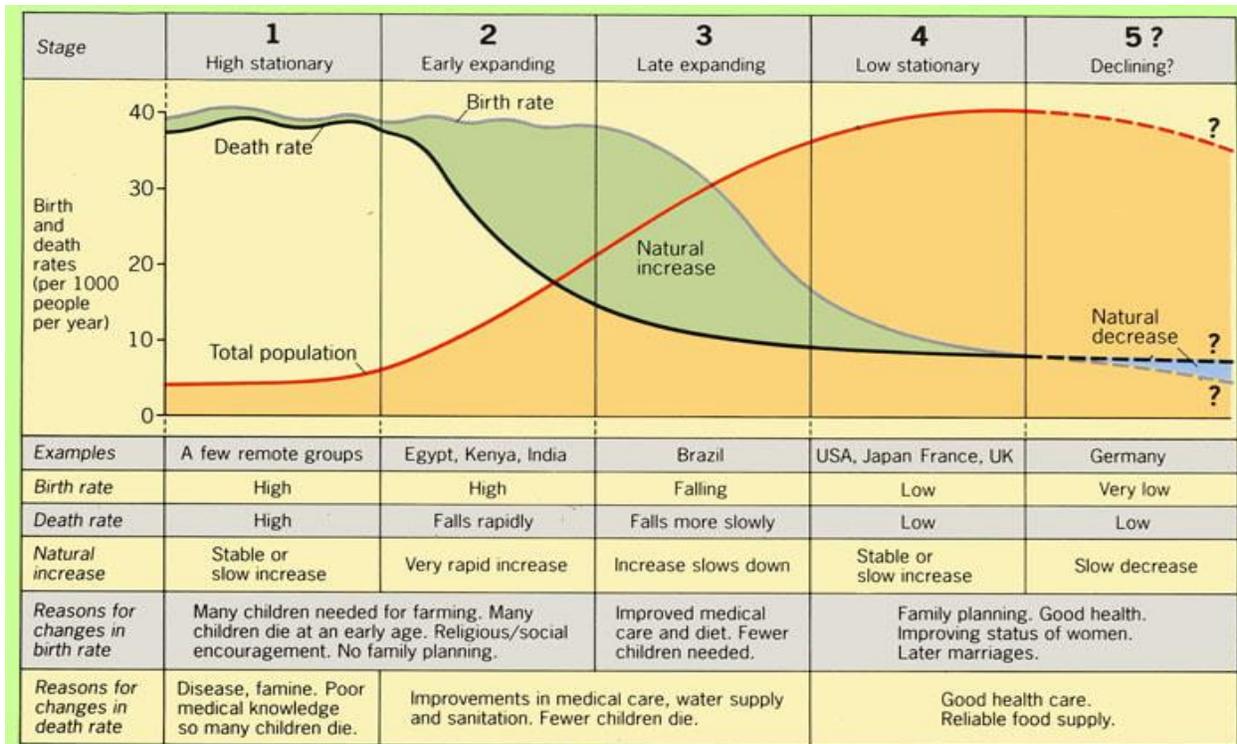
In this stage, the fertility rate declines and tends to equal the death rate so that the growth rate of population is stationary. As growth gains momentum and people’s level of income increases, their standard of living rises. The leading growth sectors expand and lead to an expansion in output in other sectors through technical transformation. Education expands and permeates the entire society. People discard old customs, dogmas and beliefs, develop individualistic spirit and break with the joint family. Men and women prefer to marry late. People readily adopt family planning devices. Moreover, increased specialization following rising income levels and the consequent social and economic mobility make it costly and inconvenient to rear a large number of children. All this tends to reduce the birth rate further which along with an already low death rate brings a decline in the growth rate of population. The advanced countries of the world are passing through this “*Lower Stationary*” (LS) stage of population development, as shown in fig. A and *CD* in Fig. B. Population growth is curtailed and there is zero population growth.

Fifth Stage

In this stage, death rate exceeds birth rate and the population growth declines. This is shown as *D* in fig. A and the portion *DP* in fig. B. A continuing decline in birth rate when it is not possible to lower death rate further in the advanced countries leads to a “declining” stage of population. The existence of this stage in any developed country is a matter of speculation, according to Blacker.

Conclusion

The theory of demographic transition is the most acceptable theory of population growth. It does not lay emphasis on food supply like the Malthusian theory, nor does it develop a pessimistic outlook towards population growth. It is also superior to the optimum theory which lays an exclusive emphasis on the increase in per capita income for the growth of population and neglects other factors which influence it. The biological theories are also one-sided because they study the problem of population growth simply from the biological angle. Thus the demographic transition theory is superior to all the theories of population because it is based on the actual population growth trends of the developed countries of Europe. Almost all the European countries have passed through the first three stages of this theory and are now in the fourth stage.



Critique of DDT

Despite its usefulness as a theory describing demographic transition in Western countries, it has been criticised on the following grounds:

Sequences of Stages not uniform: Critics point out that the sequences of the demographic stages have not been uniform. For instance, in some East and South European countries, and in Spain in particular, the fertility rate declined even when mortality rate were high. But in America, the growth rate of population was higher than in the second and third stage of demographic transition.

Birth Rate not declined initially in urban areas: Nolestein's assertion that the birth rate declined initially among urban population in Europe has not been supported by empirical evidence. Countries like Sweden and France, with predominantly rural population experienced decline in birth rate to the same extent as countries like Great Britain with predominantly urban population.

Explanations of birth rate decline vary: The theory fails to give the fundamental explanation of decline in birth rate in Western countries. In fact, the causes of decline in birth rate are so diverse that they differ from country to country. Thus the theory of demographic transition is a generalisation and not a theory. Not only this, this theory is equally applicable to the developing countries of the world. Very backward countries in some of the African states are still in the first stage, whereas the other developing countries are either in the second or in the third stage. India has entered the third stage where the death rate is declining faster than the birth rate due to better medical facilities and family welfare measures of the government. But the birth rate is declining very slowly with the result that the country is experiencing *population explosion*. It is on the basis of this theory that economists have developed economic-demographic models so that developing countries should enter the fourth stage. One such model is the *Coale-Hoover model* for India which has also been extended to other developing countries.