

CHAPTER VI

THE EFFECTS OF ECONOMIC DEVELOPMENT ON POPULATION GROWTH

The Malthusian theory of population gave a comparatively simple and pessimistic explanation of the correlation between economic development and population growth. The course of events, however, has led to the gradual evolution of a more comprehensive theory, known as the 'Theory of the Demographic Transition', which postulates a more complicated sequence of birth and death rates as typically associated with economic development.

The influence of economic development on population must operate through the determinants of population growth, namely births, deaths and migration. Migration, we leave out, as it is relatively unimportant for our discussion.

According to the theory of the Demographic Transition the characteristic features of an agricultural economy are a high degree of self-sufficiency, an unimportant role of market exchange, and a slow change in the techniques of production. The theory adds that average death rates and birth rates are often high in an agricultural society. Even though death rates and birth rates are high, there is a slight difference. Birth rates are static in nature, while death rates sometimes fluctuate in consequence of variation in crops and the varying incidence of epidemics. As birth and death rates are high, the population growth is usually slow in an agrarian society before it undergoes economic development.

What happens to this rate of growth after the society has undergone economic development? Economic development, according to the Demographic Transition, has the ultimate effect of reducing death as well as birth rates, even though in the course of the decline, birth rates normally lag behind death rates.

The theory suggests that a new economy would be created, as a result of economic development. This new economy would have the familiar attributes of the modern industrial economy, greater division of labour, the use of more efficient tools and equipment, urbanisation, orientation to the market sale of its products, and rapid and pervasive changes in transportation, communication techniques. In addition, improvements in transportation, communication and production help to bring down striking reduction in death rates. Other factors that change the death rates are the greater regularity in food supplies, the establishment of greater law and order, and other social consequences of economic change. Indirect results of fairly direct consequences of economic change. Indirect results of economic development include the improvements in sanitation, the development of medicines and other means of preventive medicine, and great improvement of hospitals and other means of treatment of disease. The decline in death rates rapid decline in the treatment of disease. The decline in death rates

as a product of economic development is illustrated in figure 2.

Economic development, according to the theory, also helps to decrease high birth rates. The structure of production changes as the society develops. The significance of the family as a unit of production is disappearing. Women are no longer subordinates, but are considered as equals. They become more active in the production of goods and services for the society. Changes in the structure of production tend to increase the possibility of economic mobility that can better be achieved with small families, and thereby tends to decrease the economic advantage of a large family. Hence children are viewed no longer as an economic asset but a burden in a society which has been industrialized. The change in attitude of the people towards the family size, therefore, has the effect of reducing birth rates. In most advanced societies, the custom of the small family has started in the urban groups at the higher end of the socio-economic scale, and has subsequently spread to the lower income groups in the rural areas.

The theory, however, provides a useful generalization that the decline in birth rates occurs after a substantial time lag in comparison with the decline in mortality rates. Figure 3 shows this correlation between economic developments and birth rates. Fertility takes longer time to fall because its decline depends more strongly on the alteration of long established customs and institutions.

It is this time lag between the decline in death rates and the decline in birth rates that creates a rapid rate of population growth. The theory is thus able to explain the increase in population that was experienced by the 'Area of European Settlement', whose population had increased sixfold between 1750-1950. Population explosion, the theory suggests would not forever stay because birth rates would finally fall, though at a much more slower pace as compared to the decline in death rates. The theory adds that in the final stage, as further reductions in death rates becomes harder to attain, birth rates again approach equality with death rates. Hence, a more radical rate of growth would be re-established with, however, low rates of mortality and small families as the typical pattern. From then onwards, death rates are thought to be relatively stable while birth rates, now being responsive to voluntary decisions rather than to deeply imbedded customs, may fluctuate from year to year. The sequence of events, as described by the theory of the Demographic Transition, can be illustrated in figure 4.

As we can see, the theory has postulated the sequence of events that fits the experience of most countries whose economies have undergone that kind of reorganization popularly known as economic development. Will, or may be this same sequence be duplicated in the underdeveloped countries? In other words, is the theory valid in these countries? This

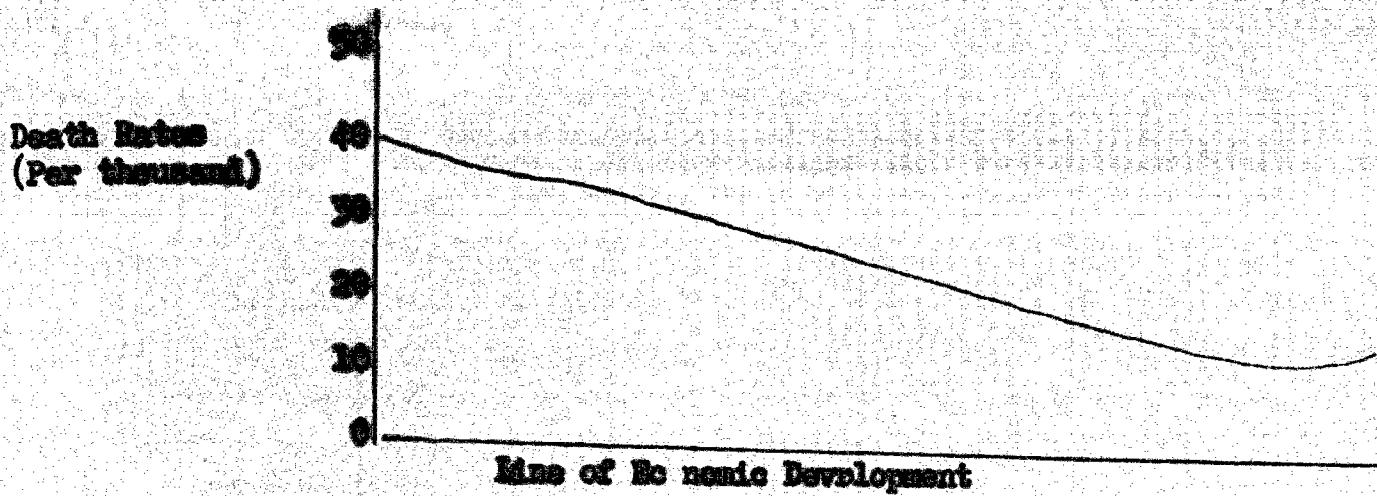
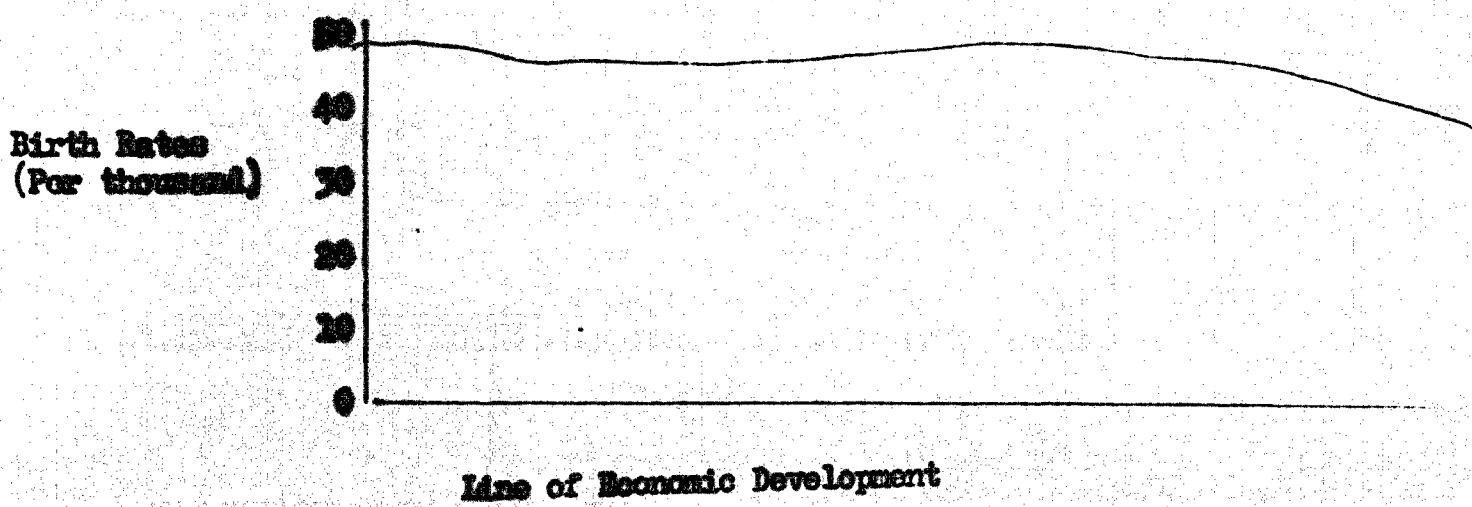


Figure 2

Effect of Economic Development on Death Rates



Effect of Economic Development

Figure 3

Effect of Economic Development on Birth Rates

Population Problem (Before & After Economic Development has been attained)	
Before Economic Development	After Economic Development
High Births & High Deaths	High Births & Low Deaths
Gradual rate of population Increase	Rapid rate of population Increase
Gradual rate of population Increase	Low Births & Low Deaths
Gradual rate of population Increase	Low Births & Low Deaths

EFFECT OF ECONOMIC DEVELOPMENT ON POPULATION GROWTH

Figure 4

is a matter of health. The principal reason is that it appears feasible today to reduce death rates markedly without economic development. We have already discussed that many underdeveloped countries, such as Ceylon, Malaya, some of the Caribbean islands, and much of Latin America have succeeded in lowering their mortality, without abandoning their present agrarian structure. Economic development has thus not been a condition of a decline in death rates. The factors primarily responsible for the decline today are improvements in public health rather than major economic changes. To sum up, mortality decline has become widespread and precipitous in recent years, through the combined effects of the following factors:¹

- (1) The development of antibiotics and insecticides. The incidence of malaria can, in most environments, be reduced to negligible proportions, through the use of residual insecticides, especially DDT at an annual cost of some 10-15 cents per capita of the population projected. Other serious diseases such as yaws, onchocerciasis, perhaps eventually tuberculosis, respond to relatively inexpensive treatment with antibiotics.
- (2) The evolution of effective public health organisations in the less developed areas. This development has become possible, in some instances, through the establishment of public health training centres. In other instances, public health workers from these areas have been sent for training in European or American universities. Expert demonstration teams operating under the auspices of World Health Organisation have also helped to get programmes started.
- (3) The invention of suitable low-cost methods of sanitation (such as improved hand flush latrines) and the discovery, through public health experiments, of effective techniques for introducing the use of such equipment and devices.

In the case of birth rates, on the other hand, it is uncertain whether the pattern of fertility decline in industrialised European countries will be copied in the underdeveloped world. Japan, which has achieved marked reduction in birth rates, may be an exception. However, in most underdeveloped nations, notably Egypt and India, where the differential fertility between city and country is slight or even non-existent, small changes in economic organisation or slight rises in per capita income are doubtful to cause a reduction in fertility. It is questionable whether the economic and social change likely in the next two or three decades in many parts of the world will be enough to have an effect on fertility. The level of economic development in European countries (and in Japan) prevailing at the time that fertility

¹A number of these factors have already been mentioned in Chapter IV

begin a significant decline might reasonably be regarded as representing the approximate "threshold of decline". It appears unlikely that this threshold will be crossed in the next two or three decades in, for example, Egypt, Pakistan, India, China, Malaya and Indonesia.

Further, the demographic situation in the areas in the incipient stages of economic development seems to differ from the pattern described by the theory of Demographic Transition. The differences can be outlined as follows:

- (1) The decline of death rates in underdeveloped areas is more rapid than it did in regions which industrialised earlier. Moreover, a decline preceded economic development in case of underdeveloped areas. In contrast, the decline in industrialised societies was caused by profound changes in the economy and in per capita incomes.
- (2) The growth rates, as mortality declines, are in excess of any observed in the records of areas industrialising earlier.
- (3) The prospect of rapid growth itself - particularly in areas where the current per capita incomes are very low - contributes to uncertainty about the likely course of fertility. The unprecedented growth rate may make it difficult to accomplish economic development that would in turn reduce fertility.

In order to achieve a slow rate of population growth, the theory of Demographic Transition suggests, a nation has to undergo economic development. For, this profound change in the economy would bring down both death rates as well as birth rates.