POPULATION AS A SYSTEM

Vl. Trebici, Dept. of Economic Cybernetics, Academy of Economic Studies, Bucharest, (Romania)

The consideration of population as a system involves two approaches: 1. Population of a closed type, where the flows are represented by births and deaths. 2. and population of the open type, where a series of interrelations with the other systems are determined. The ratio between mortality and birth rate on one hand, and the demographic structure on the other hand,

which is described with the aid of stable population (Lotka model), can be widely interpreted by means of the feedback effect of mortality on birth rate; a particular aspect is presented by the effect of infantile mortality decreasing over fertility as well as those of fertility — increasing or decreasing — over infantile mortality. The systemic interpretation leads to a matricial representation of the whole reproducing process using Markov chains. In this way, new perspectives are opened for demographic forecasting.