

SCIENTIFIC APPROACH TO THE NATURAL MOVEMENT OF THE POPULATION

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Annotation. This article talks about the natural regeneration of the population, specific indicators of birth and death in the countries of the world, the reproductive desire of the population, endogenous and exogenous factors of death, gross coefficient and net coefficient, as well as the average life expectancy of the population.

Key words: population renewal, birth, death, average life expectancy, gross rate, net coefficient.

The replacement of a population that has passed away for some reason every year at the expense of new generations is called **"natural population replenishment."** During the change of generations (population replenishment), the population's size, dynamics, age, and sex composition change.

Based on birth and death rates, natural growth rates influence population replenishment. Population replenishment is the main process ensuring the continuity of society, which is the constant renewal of humanity.

Birth and the reproductive desires of the population: Birth is one of the demographic processes, which also develops under the influence of a number of socio-economic and material factors. Furthermore, the socio-economic environment in society determines the birth rate. These include women's place and status in society, employment, financial conditions, access to medical services, the state's demographic policy, and so on. The living conditions of the population clearly reflect the geographical differences in the birth rate.

The renowned demographer B.C. Uralis expressed the opinion that "where there is poverty and destitution, living conditions and culture are at a low level." Indeed, as a population's living conditions and culture improve, their average life expectancy increases, and the number of elderly people in the population grows. People's earnings are enough to meet their family's needs and ensure their well-

being. Therefore, it is safe to say that raising the cultural level of the population will lead to a decrease in the birth rate.

Until the first half of the XIX th century, the birth rate was high in all regions of the world. By the XX th century, in most developed countries, the birth rate decreased significantly due to industrialization, the acceleration of urbanization processes, increased women's participation in production, advancements in science and education, cultural development, and the relatively late (marriage) of young people. Until the end of the XIX th century, the birth rate in European countries was high, mortality was low, and population replenishment was intensive. By the XX th century, the decline in fertility rates had become significant, and this process continues to this day. In Latin American countries, high birth rates and low mortality rates persisted until the last century. Currently, the demographic transition process is continuing in these regions.

Another factor influencing the birth process is women's place in society. In particular, women's education and participation in social production affect birth rates and the number of children in families. Women who are educated and serve in any field have fewer children than women who are solely engaged in child-rearing and household chores. Because they have to go through a difficult path to achieve their goals, find their place in society, and, as a result, get married late, having fewer children. The breadth of their thinking, their level of education and culture negates the possibility of having «many children».

As an example, in the gender composition of the population of developed European countries, 45-50% of women are employed in the economy. In the countries of Asia and Africa, this indicator is significantly lower. Women's participation in socio-economic spheres differs significantly not only across countries but also in their regional composition. Therefore, birth rates are not the same among urban and rural populations. This situation, preserved since ancient times, demonstrates that the birth rate of the rural population has always been higher than that of the urban population.

One of the factors positively influencing fertility is the marriageable age. The marriageable age is determined by the state. Early marriage increases the birth rate, while later marriage leads to a decrease in divorce but a lower birth rate. In the countries of Africa, Asia, and Latin America, young people marry early. In Western Europe, it's the opposite. If marriage is the basis for the change of generations in society, divorce will lead to a significant decrease in the birth rate. Preventing divorces and maintaining the birth rate is a matter of national importance. For this reason, every country pursues a "demographic policy" to monitor demographic processes, take appropriate measures, and influence birth rates. In countries with low natural population growth, a policy aimed at increasing the birth rate is pursued. In this case, the population will be provided with material and moral incentives, favorable conditions will be created for young families, and the above-mentioned divorces will be strictly controlled by the state.

Currently, policies aimed at increasing the birth rate are being pursued in Western countries. On the contrary, there are countries that pursue a policy of restricting births. They are forced to pursue this policy because their population is naturally growing rapidly. The policy of restricting births is characteristic of developing Asian countries. Specifically, countries with high population growth rates, such as China, India, and Indonesia, are home to over 40% of the world's population. In China, early marriage is strictly prohibited, especially during students' studies. In China, since 1979, a demographic policy has been pursued under the slogan "one child per family," since 2015 two children have been allowed, and since May 31, 2021, three children have been allowed. Unfortunately, as a result of nearly 40 years of demographic policy, Chinese youth are now expressing their opinion that they do not want to have many children.

In demography, women's reproductive (being able to bear children) age, the birth of daughters (future mothers) and their survival possibilities have been scientifically studied and divided into the following two groups;

- **Gross coefficient** - for each person of reproductive age (15-49 years) How many daughters does a woman leave behind;

- **Net coefficient** - reproductive (15-49 years old) per woman The surviving of their daughters until their mother's age.

Population Mortality and Life expectancy: Mortality is the primary process in the succession of generations. The death of the population occurs due to various causes. Mortality is an important demographic process in the natural growth and decline of the population. Endogenous and exogenous factors mainly influence the occurrence of death.

Endogenous factors - are factors that cause the internal activity of the human body, its formation, development, and the decline of its activity over time, i.e., aging. Usually, due to endogenous factors, the adult population dies more often. This situation is usually considered a normative phenomenon. Unfortunately, even among the younger population, mortality occurs due to endogenous problems. These are caused by incurable hereditary (hereditary) diseases and acquired diseases.

Exogenous factors - are the death of people due to external influences, resulting in the death of people of different ages at different times and for various reasons. These factors include various natural disasters, infectious diseases, occupational diseases, diseases resulting from difficult and unfavorable working conditions, accidents, poisoning, drug addiction, alcoholism, and others. As a result of modern industry, urbanization, scientific and technological progress, automation, and the chemicalization of the national economy, the pollution of the environment, especially atmospheric air, and wastewater pollution are contributing to a further increase in mortality, illnesses and acquired diseases.

Mortality rates depend on the level of development of productive forces in each region, the living conditions of the population, and the state of the healthcare system. The higher the level of development of these sectors, the lower the mortality rate, or vice versa. The high mortality rate in many developing countries indicates a low level of development in the aforementioned sectors. For example; The global mortality rate is very high in African countries. The mortality rate per 1000 people is 15-20‰ (per mille), reaching up to 25‰ in some areas.

Europe is the second region with a high mortality rate. These two geographical regions, sharply differing in their socio-economic development, are similar in terms of mortality. Death rates are higher than birth rates in almost all regions of Europe. The relationship between the overall mortality rate and the country's economic development is not always self-evident. In particular, the European region, despite its economic strength, is distinguished by a high mortality rate among the population. It is advisable to assess this situation not by socio-economic conditions, but by the age characteristics of the population. Therefore, in science, when analyzing population mortality rates by age, they are studied by dividing them into separate groups. When analyzing the mortality rate of the European population by age groups, mortality is less common among children and middle-aged people, and conversely, it is very high among the elderly. Considering the high proportion of elderly people in the population's age structure, we consider this a natural general mortality rate. At the same time, mortality due to exogenous factors is more common in the European population. A low birth rate and a higher mortality rate than births lead to a natural population decline. Today, a similar population growth is occurring in the demographic situation of the European continent, meaning the population is naturally declining.

A comparative assessment of the African continent reveals the region's lagging socio-economic development, insufficient development of healthcare, the excessive number of newborns, and the high mortality rate among them. High or low mortality rates are directly related to the death of infants under one year of age. According to 2021 data, the birth rate per 1000 newborns is on average 31‰ worldwide. Of these, 47‰ in Africa, 4‰ in Europe, 16‰ in Australia and Oceania, 26‰ in Asia, and 12‰ in the Americas [3].

The geographical location and migration of the population have a certain impact on mortality. In densely populated areas, various epidemic diseases spread rapidly, and in areas where migration flows are directed, migrants carry infectious diseases with them. As a result, it leads to an increase in fatalities. Mortality rates

determine the average life expectancy of populations in different geographical regions.

According to 2022 statistics, the global average life expectancy is 71 years for men and 75 years for women. The highest average life expectancy is observed in developed countries (men - 76 years, women - 82 years) [3]. The average life expectancy of 80 years and older is most often observed in women, while it is relatively low in men. Countries where women have a life expectancy of 80 years or more; China (Hong Kong) - 88 years old, Japan - 87, South Korea - 86, Norway - 85, Finland - 84, Sweden - 84, Greece - 84, Italy - 84, Canada - 84, Taiwan - 84, and Western European countries - 84 years old. Kuwait - 83, Qatar - 82, Panama - 82, Uruguay - 81, Maldives - 81, Brazil - 80, USA - 80, Sri Lanka - 80 years old [3]. In these listed countries, the lowest infant mortality in the world is clearly observed. Achieving longevity depends on the socio-economic development of each country, and its achievements in healthcare and promoting a healthy lifestyle are evident.

When analyzing the natural movement of the population from a scientific point of view, we cannot ignore "demographic policy." The main goal of demographic policy in almost all countries of the world is to raise the quality of life of the population to a high level. Then the population's:

- improving health;
- reducing maternal and child mortality;
- increasing average life expectancy;
- the level of stable food supply;
- social support;
- improving the quality of daily services;
- improving the quality of education;
- raising the level of urbanization;
- Stabilization of migration.

In the Republic of Uzbekistan, public policy also consists of links closely interconnected with state policy. These links can include demographic policy,

population migration, urbanization, and employment policies. The implementation of the aforementioned measures is under the close attention of our state. Mass media and social networks are widely used in the implementation of demographic policy in the Republic of Uzbekistan. This includes supporting and legally protecting young families from having children, and conducting awareness campaigns on "optimal family," "healthy child," and "strong family." Based on the laws established by the Family Code, families are being restored and supported by the state.

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