THEORETICAL FOUNDATIONS OF THE FORMATION AND DEVELOPMENT OF ECONOMIC DEMOGRAPHY

Shaira Khalillaevna Djumabaeva
Associate Professor at Mamun University
ORCID: https://orcid.org/0009-0008-6383-4543

Abstract: This article examines the interrelationship between population and economy, the influence of socio-economic conditions on demographic processes, and the impact of demographic factors on socio-economic dynamics. It also explores the economic consequences of population growth, as well as the structure, subject matter, formation, and scientific theoretical foundations of economic demography.

Keywords: population, economy, demography, social, process, factor, population growth, economic consequences, structure, formation, development, scientific theory.

ТЕОРЕТИЧЕСКИЕ ОСНОВЫ ФОРМИРОВАНИЯ И РАЗВИТИЯ ЭКОНОМИЧЕСКОЙ ДЕМОГРАФИИ

Джумабаева Шаира Халиллаевна
Доцент Университета Мамун

Аннотация: В данной статье рассматривается взаимосвязь между населением и экономикой, влияние социально-экономических условий на демографические процессы и воздействие демографических факторов на социально-экономическую динамику. Также исследуются экономические последствия роста населения, а также структура, предметная область, формирование и научные теоретические основы экономической демографии.
Ключевые слова: население, экономика, демография, социальный, процесс, фактор, рост населения, экономические последствия, структура, формирование, развитие, научная теория.

Population and Economy represent two interdependent pillars of human society. In the process of societal development, population plays a decisive role both as a primary productive force and as a consumer. On the one hand, the production of essential means of life contributes to the emergence of individuals as separate economic agents in society. On the other hand, the population itself becomes the foundation and subject of production as both a producer and consumer of goods and services [1, p. 8].

By the end of the eighteenth century, the study of population dynamics began to gain significant attention. Based on the results of population censuses, particular emphasis was placed on assessing the economic consequences of

population growth. In its early stages, economic demography analyzed two types of interactions: the impact of socio-economic conditions on demographic processes and the influence of demographic factors on socio-economic dynamics. The further development of demographic studies enabled a more precise evaluation of the impact of socio-economic factors on demographic processes.

Economic demography is a field that studies the interrelationship between population and economic development, the economic consequences of population reproduction, and the influence of economic factors on demographic development [1, p. 7]. Scientific research in the field of economic demography began in the nineteenth century. In the mid-nineteenth century, A. P.

Roslavsky-Petrovsky was among the first scholars to draw attention to the economic significance of different age groups within the population. During the Soviet period, the first major works devoted to economic-demographic development factors began to appear between 1925 and 1935. For example, S.G. Strumilin distinguished between the direct and indirect influence of economic factors on population growth and emphasized the importance of the qualitative structure of the population, particularly for the country's economic development and education.

Among economists, there are various approaches to defining the subject of economic demography [1, p. 15]. According to some scholars, economic demography is a discipline that studies the influence of the age-sex structure of the population on production and consumption processes, where employment serves as the connecting link. In a broader approach, the subject of economic demography is defined as the interaction between the economy and population reproduction, as well as the regularities of interaction between demographic factors and socio-economic processes. In conclusion, the subject of economic demography is the study of the impact of demographic factors on economic development and its underlying laws. Although such an analysis has significant economic importance, for a long time it remained one of the least developed areas in demographic literature.

In the second half of the twentieth century, the relatively slow economic growth, along with the increasing complexity and deepening of regional imbalances between production and the labor force, required greater attention to the demographic factors of labor resource formation. Only in the second half of the 1970s did a trend begin to emerge in economic-demographic research aimed at broadening the scope of analysis. Nevertheless, the demographic dynamics of economic development. Effects on production and consumption continued to receive insufficient attention in economic-demographic studies [2, p. 45].

The current structure of economic demography, taking into account the specific characteristics of demographic factors, consists of three main sections [1, p. 11]:

Economics of population growth;

Economics of population quality;

Economics of socio-demographic structures.

The economics of population growth was introduced into scientific literature by J. Simon in 1977 [3, p. 177]. It is one of the most thoroughly studied directions in economic demography, covering the transition period between the twentieth and twenty-first centuries. The main objective of this field is to determine how population growth (labor resources, workforce) and its determinants (birth and death rates) affect the dynamics of macroeconomic indicators such as gross domestic product, labor productivity, savings volume, and similar variables.

Within the economics of population growth, two types of research approaches can be identified. In the first type, the analysis is based on single-sector models, where only the impact of demographic factors on the economy is examined. In the second type, both the influence of demographic factors on economic development and the reverse impact of economic development on demographic variables are studied. These interrelations are analyzed using multi-sector models of population growth economics.

The economics of population quality was introduced into scientific literature by T. W. Schultz and emerged in the second half of the twentieth century [4]. The qualitative characteristics of the population include the level of health and education, professional skills and qualifications, entrepreneurial ability, life experience and practical skills, intellectual worldview and consciousness; ethical standards and moral behavior; as well as spiritual maturity are also included in this category [Uralnis B.C. *Problems of Economic Demography* // *Problems of Demography. Questions of Theory and Practice* / Ed. by D.L. Broner, I.G. Venetsky. Moscow: “Statistika”, 1971, p. 45].

One of the earliest sections of the economics of population quality is devoted to analyzing the impact of individual qualitative characteristics of the population, as well as the influence of overall population quality on the level of gross domestic product per capita and its rate of change. Other sections include methods for assessing the impact of various qualitative characteristics (forms of human capital) on the level of individuals’ current income.

The economics of socio-demographic structures traces its origins to the works of W. Farr, a nineteenth-century scholar who studied the economic consequences of changes in population age and other socio-demographic structures [Farr W. “On the Economic Value of the Population” // *Population and Development Review*, 2001 [1877], 27(3), pp. 565–571]. This field consists of four main sections.

The first section is devoted to the analysis of population composition as a factor influencing the scale of production and consumption. The second section consists of “functional population forecasts,” which estimate the future size and structure of population groups that form the contingents of producers and consumers across different economic sectors.

The third section includes socio-demographic structures (such as sex, age, and cohort affiliation), which determine the nature and level of consumer demand, along with related geographical, behavioral, and income parameters. These studies represent an inseparable element of demographic segmentation.

The fourth section is devoted to the use of multidimensional tables in economic-demographic analysis. These tables are considered a universal method for studying various population conditions.

The presented structure of economic demography is to some extent conditional in nature. First, its different sections often share common foundations. Models based on production functions and The development of one-sector growth models incorporating human capital structures has played a key role in advancing research within the economics of population quality. Secondly, the various elements of demographic factors are interrelated. As a result, a deeper analysis of one element often leads to findings that are relevant to the study of another element. Thirdly, a number of modern economic-demographic studies (such as multi-sector recursive analytical models) focus on analyzing the combined impact of demographic components on the economy, including population growth rates, age structure, and qualitative characteristics. Thus, these aspects indicate a growing tendency toward the development of complex (single- and multi-sector) economic-demographic models.

The Keynesian revolution in economics led to the expansion of the scope and deepening of economic-demographic research. It demonstrated the relationships between the level of employment, the accumulation of capital, and the growth of national income [6, p. 34]. As early as the 1920s, J.M. Keynes highlighted the negative consequences of declining population growth rates. He developed key elements for constructing models used to estimate aggregate macroeconomic indicators such as total savings. Keynes identified subjective factors influencing consumption, including birth rates and the increasing costs required to sustain life. In doing so, he outlined the essential features of modern macroeconomic concepts that form human capital.

According to E. Hansen, one of J.M. Keynes' followers, the development of favorable investment opportunities in the United States during the nineteenth century was largely associated with technological progress and population growth [7, p. 342]. In his later work, Hansen emphasized investments in education as a foundation for interpreting human capital as a source of high returns, thereby linking it to social It also emphasized the economic feasibility of such expenditures.

From the 1950s onward, research on the impact of demographic processes on economic dynamics gradually moved beyond purely academic interest. In economically developed countries, this shift was associated with identifying optimal parameters of the relationship between population change and growth in

national income, forecasting consumption and investment under different population growth rates, and assessing the impact of investments in human capital (particularly education) on economic growth rates [8, p. 170].

The practical aspects of economic-demographic analysis were further strengthened in the United Nations report published in 1953 entitled *Determinants and Consequences of Population Trends*. This report emphasized the importance of distinguishing between the short-term and long-term effects of demographic dynamics [9, p. 8]. Population growth may lead to an increase in per capita production in industrialized countries experiencing labor shortages, or in countries where resources are underutilized but can be mobilized for production. On the other hand, in countries where it is difficult to achieve a balance between demographic dynamics and the development of material resources, population growth may become an obstacle to increasing per capita output. For example, it may hinder the accumulation of physical capital.

The 1973 report entitled *Determinants and Consequences of Population Trends* reflects a growing pessimistic view regarding the interrelationship between demographic and economic processes [10]. This perspective suggests that although population growth is not necessarily one of the main determinants of economic growth, high population growth rates were increasingly seen as a factor limiting improvements in living standards.

In the 1973 report, particular attention was also given to the difficulties of modeling the impact of demographic trends on the economy, including productivity levels (production methods, specialization, economies of scale, skill levels, technological development, etc.) and the interrelationship between population size, education, and economic development. It was emphasized that due to the large number of interdependent factors and the complexity of their interactions, such models contain significant gaps, making their empirical analysis highly challenging [10]. Among the studies conducted in the 1970s and 1980s, the works of J. Spengler and J. Simon occupy a special place in defining the development of modern economic demography. In particular, J. Simon’s several monographs on economic demography and human resources can be noted [12].

Spengler outlined the prospects of economic-demographic analysis and emphasized that the impact of population growth on the economy should be examined through the following dimensions [11, p. 82]: capital formation; changes in the age structure of the population; changes in employment; environmental impact; changes in population density; ensuring human freedoms; emergence of conflicts; and improvement in population quality.

The separate identification of these aspects contributed to the specification of exogenous variables in modern growth models. Highlighting the importance of studying population quality as one of the key long-term determinants of economic

growth, Spengler hypothesized that a population growth rate of zero would, in many respects, lead to an improvement in population quality [11, p. 82].

J. Simon's 1981 monograph significantly influenced the formation of the so-called "revisionist" approach. Proponents of this approach studied not only the short-term negative effects of population growth but also its long-term positive effects. Simon argued that natural he explained that the long-term decline in resource prices (despite increasing demand associated with population growth) had been achieved through the substitution of alternative resources and the rapid development of supply capabilities.

In studying the reasons for the increasing value of human life, W. Farr particularly emphasized the role of education (raising literacy levels) and health improvement (increasing life expectancy) [5, p. 571].

In conclusion, the future development of research in economic demography will be characterized by a deeper investigation of the interrelationship between population reproduction and economic development.

REFERENCES

1. Sagradov A.A. *Economic Demography: Textbook*. Moscow, 2005, p. 7.
2. Urlanis B.C. "Problems of Economic Demography" // *Problems of Demography. Issues of Theory and Practice* / Ed. by D.L. Broner, I.G. Venetsky. Moscow: "Statistika", 1971, p. 45.
3. Simon J.L., and Steinmann G. "Phelps's Technical Progress Model Generalized" // *Economic Letters*, 1980, pp. 177–182.
4. Schultz T.W. *Economics of Population*. Reading (Massachusetts): Addison-Wesley Publishing Company, 1981.
5. Farr W. "On the Economic Value of the Population" // *Population and Development Review*, 2001 [1877], 27(3), pp. 565–571.
6. Keynes J.M. *History of Economic Thought*. Moscow: "Prior Publishing House", 1999, p. 34.
7. Hansen E. *Economic Cycles and National Income*. In: *Classics of Keynesianism*, Vol. 1. Moscow: Economics, 1997, p. 342.
8. Kuznets S. "Population and Economic Growth" // *Proceedings of the American Philosophical Society*, 1967, pp. 170–193.
9. Spengler J.J. *Population Change, Modernization and Welfare*. Englewood Cliffs: Prentice-Hall, 1974, p. 82.

10. Simon J.L., and Steinmann G. “Phelps’s Technical Progress Model Generalized” // *Economic Letters*, 1980, pp. 177–182.