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Interconnection of demographic processes and economic growth

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Abstract

The article describes the main demographic trends and their impact on economic growth. Nowadays this problem is actual not only for Russia but for most other countries too. The text presents information about the negative effects of demographic situations and interconnection between these situations and economic growth. The goal of the study is to analyse the influence of demography on economic growth. The results of the work are given as recommendations in the field of demographic policy that can minimize the negative effects of these problems. This article is a great interest for researches dealing with the problems of sustainable economic growth.

Keywords: economic growth, demography, ageing of population, human resource

1. Introduction

Stimulation and maintenance of sustainable economic growth is one of the priorities for the economy of any country. At present, there are many empirical studies examining the influence of various factors on economic growth including classical factors (labor, land, capital) and institutional ones (democracy, private property, education, etc.). However, according to the research, the greatest impact on economic growth is provided by technical progress. In the fundamental works of the American scientist, Edward F. Denison, it was proved that "the raise of labor productivity as the result of technological progress has the greatest share in stimulating economic growth" [4]. In turn, labor productivity directly depends on demographic processes. S. Kuznets proves that waves of immigration and other demographic factors, such as the formation of households and changes in the age structure, marriage and birth rate, give rise to long fluctuations in the rates of economic growth [5]. In this paper, the current demographic trends and their implications for economic growth are considered.

2. Discussion

One of the modern demographic trends that characterize the global economy is the global aging of the population. According to Morgan Stanley [1], this problem covers the economy with a cumulative share of 78% of world GDP (64% - GDP at purchasing power parity) and it is the reason for the annual reduction of the world growth. Table 1 [3] shows that the proportion of the population aged 65 and over is increasing year by year. On the one hand, this trend is characterized by the progress in medicine and public health, but on the other, it has many negative effects.

Table 1. Distribution of the world's population due to age groups (according to the UN)

| Years | 0-14 | 15-64 | 65+ |
|--------------|-------------|--------------|------------|
| 1990 | 32,9 | 61,0 | 6,1 |
| 1995 | 31,9 | 61,7 | 6,5 |
| 2000 | 30,2 | 63,0 | 6,8 |
| 2005 | 28,0 | 64,7 | 7,3 |
| 2010 | 26,7 | 65,7 | 7,6 |
| 2015 | 26,1 | 65,7 | 8,3 |

Table 1 shows a number of alarming conclusions related to the demographic structure of the population and affecting economic growth, namely:

1. Decrease in labor productivity. This problem primarily affects the industries with a high proportion of physical labor, such as construction, mining, industrial production. As for doctors, scientists, managers their labor productivity increases with age because of the knowledge accumulation. Thus, the influence degree of population aging depends on the structure of the economy and measures of socio-economic policy.

To solve this problem, an integrated approach is needed, including comprehensive measures in the labor sphere (stimulation of enterprises to the employment policy of pensioners and youth), the social sphere (stimulation of "short" maternity leave), as well as in health (life expectancy) and education (development of leisure Activity of schoolchildren of lower grades to increase employment of young mothers).

2. Increase in the demographic burden. This indicator shows the burden on the society by the unproductive population. For example, in Russia, the forecast until 2030 shows that this coefficient will increase. In accordance with the average forecast for 2020, 1000 people of working age will account for 824 people who are not able to work; by 2030, there will be 857 people. In addition, according to Rosstat (the Federal State Statistics Service), the number of pensioners has already exceeded the number of children and this number increases every year [2]. To reduce the burden, it is necessary to reform the pension system, to stimulate retirees to business activity after retirement.

With a more detailed examination of the age structure of the population, another trend, namely the change in the geopolitical map of human resources can be distinguished. Table 2 [3] shows that by 2025, Asia and South America will be new centres of able-bodied population. In Europe and North America, there is a rapid increase in people aged 65 and over. Thus, by 2025, the center of global politics and economy will shift from the EU and the USA to the most developed countries of Asia: China, India; and South America: Brazil. There will be an increase in the influence of these countries on the economic, military, cultural, scientific and technical aspects. In addition, migration from Latin America and Asia can become a source of growth in the population of "aging" countries.

Table 2. Changes in the population proportion in a number of regions by age group,% (compiled by the author according to UN data)

| Regions | 15-64 years old | | | 65+ | | |
|----------------|------------------------|-------------|-------------|-------------|-------------|-------------|
| | 2000 | 2025 | 2050 | 2000 | 2025 | 2050 |

| | | | | | | |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Africa | 54 | 57,2 | 61,9 | 3,4 | 3,90 | 5,9 |
| Asia | 63,8 | 67,5 | 63,8 | 5,7 | 10,1 | 18,2 |
| Europe | 67,8 | 63,1 | 57,3 | 14,7 | 21,1 | 27,6 |
| South America | 62,5 | 67,2 | 63,4 | 5,6 | 10,3 | 19,5 |
| North America | 66,6 | 62,9 | 60,1 | 12,3 | 19,1 | 22,7 |

3. Conclusion

To sum up, demographic problems have become the most significant one in the modern world and every state pays special attention to the demographic problems and it is reflected in the demographic policy, as well as in family and migration policy.

Thus, an analysis of the relationship between the age structure of the population and the rate of economic growth shows that the raise of the age of the able-bodied population adversely affects labor productivity, and increases the demographic burden, which ultimately significantly limits the economic growth. Implementing comprehensive policies in the areas of health, education, as well as the social, labor sphere the state should reduce the negative effects of this process.

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