# SOURCE ECONOMIC SECURITY SYSTEM SPENDING **CITIZENS**

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## **ANNOTATION**

This article discusses the impact of demographic aging of the population in developed countries on their economies. The coefficients for assessing the financial condition of the pension system are given. The level of participation of the population in pension provision is considered to assess the effectiveness and sustainability of the pension system. The contributions to pension insurance in the system of compulsory state insurance are

**KEYWORDS.** demographic aging of the population, coverage coefficient, satisfaction coefficient, redundancy coefficient, investment coefficient, efficiency coefficient, risk coefficient, continuity coefficient.

#### INTRODUCTION

Today, changes in the age structure of the population and the increasing proportion of elderly individuals relative to the working-age population affect a significant portion of economically and socially developed countries. Currently, there are 54 countries classified as "aging" nations, where citizens aged 65 and older make up more than 14% of the population, and 42 countries fall into the category of "aged" nations, where people aged 65 and older constitute 7-14% of the population. By 2050, it is expected that the number of countries in the first group will increase. It is anticipated that there will be 111 countries in the first group and 36 countries in the second group, encompassing 87% of the world's population. The scale and frequency of these demographic changes give rise to a range of issues related to the provision of support for elderly individuals, including pensions, social benefits, medical expenses, and other social welfare expenditures.

Demographic changes, including an increase in average life expectancy, also necessitate ongoing reforms in the pension system in Uzbekistan. In particular, the new development strategy for Uzbekistan for the years 2022-2026 places significant emphasis on "improving the pension system," with 54 goals dedicated to ensuring a consistent increase in the size of citizens' pensions in line with the country's economic indicators (Presidential Decree No. UP-60, 2022).

In this article, we will explore research conducted in the context of demographic changes, including the identification and mitigation of factors that will influence the pension system in the future due to changes in average life expectancy.

## LITERATURE REVIEW

Today, many international organizations and scholars provide their insights into the necessity of pension system reform through research.

"Nobel laureate in economics R. Diamond (2011) analyzed the impact of various approaches to pension system creation on the labor market, savings, and economic growth. In his study, 'Economic Theory, Taxation, and Pension Policy,' he conducted an in-depth analysis of mandatory pension insurance."

- "G. Tetlow (2015) stated in his research on pension provision that reforms in the pension system are necessary to increase pension transfers, with a focus on non-government pension funds."
- "A. Borsch-Supan (2018) examined the main challenges of reforming the pension system (private, solidarity pension system) in European countries in terms of incurred costs and the increase in the average life expectancy of the population."
- "Sh. Rajabov (2021), in his doctoral dissertation, addressed the issues of implementing nongovernmental pension funds in Uzbekistan, studying the theoretical and organizational foundations."

Social security is regarded as a fundamental human right, enshrined in international legal documents such as the "Universal Declaration of Human Rights" (1948) and the "International Covenant on Economic, Social, and Cultural Rights" (1966), affirming the right to regular pension payments to the elderly population, who have partially or completely lost their ability to work to a minimum.)

Research Methodology

This article addressed the issue of pension system reform due to changes in average life expectancy, within which scientific works by foreign and domestic scholars in this field were studied. During the research, analytical analysis and comparative analysis methods were employed.

#### ANALYSIS AND RESULTS

The proportion of elderly people in the world is expected to significantly increase. By 2050, every sixth person in the world will be older than 65 years old (16% of the population), compared to every eleventh person in 2019 (9% of the population). Moreover, the number of people aged 80 years and older will triple, from 143 million in 2019 to 426 million in 2050. According to projections, by 2100, there will be more people aged 65 and older for the first time than those younger than 15 years old. This not only foreshadows challenges in healthcare, pension provision, and social protection but also demands significant changes in lifestyle, demographics, and programs at all levels.

Demographic aging of the population in developed countries has serious economic consequences. Wealthy developed countries in Europe and Asia are addressing this issue by increasing quotas for the import of foreign labor. This, in turn, can exacerbate deflationary trends caused by population aging and demographic crises in some regions of the world. The global demographic trend of population aging, driven by declining birth rates, can have a devastating impact on the economies of both developed and developing countries, especially those that have not yet completed the demographic transition. Pension expenses can become a massive burden on the budget, which is further exacerbated by the increasing number of retirees and active emigration.

The proportion of elderly people in the population of economically developed countries is increasing, becoming a problem that leads to a demographic crisis. In several developed countries, such as Spain, Italy, etc., it is expected that by 2030-2050, between 30% to 40% of the population will be people over the age of 65, predominantly women, many of whom are either single or widowed.

This phenomenon is causing a decrease in economic growth in most developed countries and is creating challenges in providing support and care for the elderly. As the life expectancy of elderly individuals increases, they will play an increasingly significant role in society and the economy. However, the growth in the number of elderly people can also lead to problems in the government's financial sector and place a burden on the younger generation.

Research indicates that in developed countries, the proportion of elderly people exceeds the number of children under five years old, and by 2050, it is expected that their population will surpass the number of teenagers and youth. This poses significant challenges in providing care and support for the elderly, especially in regions such as Europe and East Asia.

It is important to pay attention to this issue and develop appropriate policies and programs to ensure support and care for the elderly. Addressing this problem not only contributes to the well-being of the elderly but can also have a positive impact on economic growth and the development of society as a whole.

Demographic forecasts point to the need for taking measures to address the growing number of elderly people in society and prevent a demographic crisis. Possible solutions include increasing the level of economic activity among the elderly, providing support to families with children, and developing social welfare programs.

Aging population impacts healthcare and long-term care needs and expenditures. To ensure the sustainability of the government financial system, the retirement age for receiving pension benefits is being raised. Elderly individuals, who in many countries fund a portion of their consumer expenses, such as healthcare, make a significant economic contribution to society. They can also contribute to economic growth if they continue working in their older years. To ensure sustainability and access to government resources for all elderly people, it is important for policymakers to have a more precise understanding of the scale of expenditure increases and income distribution among the population.

Coefficients for Assessing the Financial Condition of a Pension System:

- 1. Coverage Ratio: This coefficient indicates how sufficient the accumulated funds are to meet future pension payments. It is calculated by dividing the assets of the pension system by expected pension payments.
- 2. Satisfaction Ratio: This coefficient helps determine what portion of expected pension payments will be covered by accumulated funds. It is calculated by dividing accumulated funds by expected pension payments.
- 3. Reserve Ratio: This coefficient reflects the financial stability of the pension system. It is calculated by dividing the pension system's reserve amount by current pension obligations.
- 4. Investment Ratio: This coefficient shows how effectively pension funds invest their assets. It is calculated by dividing investment income by the total assets of the pension system.
- 5. Efficiency Ratio: This coefficient allows assessing the efficiency of managing the pension system. It is calculated by dividing income from managing pension assets by the total assets of the pension system.
- 6. Risk Ratio: This coefficient indicates the level of risk associated with the investment decisions of the pension system. It is calculated by assessing the volatility of investment income of pension funds.

- - 7. Continuity Ratio: This coefficient assesses the continuity of pension payments. It is calculated by dividing the share of working pensioners by the total number of pensioners in the system.
  - 8. Stability Ratio: This coefficient indicates the level of stability of the pension system to changes in the economic environment. It is calculated by assessing changes in the size of assets and obligations of the pension
  - 9. Accessibility Ratio: This coefficient shows how accessible pension payments are for retirees. It is calculated by dividing the total pension payments by the average payment amount.
  - 10. Effective Return Ratio: This coefficient allows evaluating the performance of pension investments. It is calculated by comparing the actual return on pension assets with the expected return.

These coefficients are the primary tools for assessing the financial condition and stability of a pension system. They enable the identification of potential issues and risks, as well as the determination of necessary measures to ensure the sustainability and accessibility of pension payments.

The level of participation in pension provision is an important indicator for assessing the effectiveness and sustainability of the pension system. This indicator is based on how many people participate in the pension system and are eligible to receive a pension.

To calculate the level of participation in pension provision, it is necessary to determine the total number of people who are eligible to participate in the pension system and the number of people who actually participate in it. The higher the participation rate, the more effective and sustainable the pension system is considered to be.

Various data can be used to assess the level of participation, such as the size of the working-age population, the number of retirees, and the number of people receiving pensions. This helps determine the proportion of the population that is participating in the pension system.

The level of participation of the population in pension provision is of great importance for the planning and management of the pension system. It helps assess the financial stability of the system and determine the necessary changes and improvements.

In the pension system, there is also a concept known as actuarial fairness. Actuarial fairness is an important principle in the pension system, based on financial collective equivalence, which allows for long-term financial balance of the pension system. Regulating income redistribution and preventing the use of pension insurance resources for financing other expenses are also essential for ensuring actuarial fairness.

Actuarial support of the pension system requires addressing priority tasks of methodological, statistical, accounting, and regulatory nature, as well as studying the scale of the problem and its consequences for different population groups. Reliable data on demographic characteristics, the economic status of the insured, and the circulation of financial resources are also required for conducting actuarial calculations.

The principles of social protection for the insured are also important for actuarial fairness. Pension systems should be affordable for contributors in terms of financial burden and provide social protection for the insured, including low-wage workers.

In general, actuarial fairness is an important principle in the pension system that helps ensure long-term financial stability and social protection for the insured.

There is also another important indicator in the pension system, which assesses how much of an individual's earned income, resulting from their labor, will be replaced by the pension after reaching the retirement age.

The coverage ratio in the pension system, overall, is the ratio of funds flowing into the state pension fund to the expenditures on pension payments. A high coverage ratio means that the funds entering the state pension fund are sufficient to provide the necessary level of pension payments. A low coverage ratio indicates a lack of funds to provide stable pension payments. Overall, the coverage ratio in the pension system is crucial for ensuring a decent quality of life for elderly individuals.

"European countries today spend 13-15% of GDP (the highest rate among countries worldwide) on funding state pensions, while Latin American countries (Chile, Mexico) and Iceland spend less than 3% of GDP because private, professional (corporate or individual) pension systems make up the primary part of the pension system. The non-governmental pension insurance system is considered to be most advanced in countries like the Netherlands, Canada, the United Kingdom, and exceeds 5% of GDP" (Pension at First Glance, 2021).

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| earnings, 2020) (Pension at a Glance, 2021) |          |          |       |
|---|----------|----------|-------|
| Country                                     | Employee | Employer | Total |
| Austria                                     | 10,25    | 12,55    | 22,8  |
| Belgium                                     | 7,5      | 8,9      | 16,4  |
| Germany                                     | 9,3      | 9,3      | 18,6  |
| Italy                                       | 9,19     | 23,81    | 33    |
| Canada                                      | 5,25     | 5,25     | 10,5  |
| Lithuania                                   | 8,7      | -        | 8,7   |
| Poland                                      | 9,8      | 9,8      | 19,6  |
| United States                               | 5,3      | 5,3      | 10,6  |
| Finland                                     | 7,15     | 15,2     | 22,4  |
| France                                      | 11,3     | 16,5     | 27,8  |

Table 1. Contributions to the mandatory state pension insurance system (as a percentage of

"According to estimates by experts from the International Monetary Fund (IMF), as a result of pension reforms by 2050, some countries (Finland, France) will reduce government expenditures on pension financing to 0.4-1.5 percent of GDP, while other countries (Czech Republic, Spain, Germany) will increase it to 0.7-3.3 percent of GDP" (Fouejien, 2021).

9,15

18,3

9,15

In the world, pension reforms are pursued with different objectives. While the main goal of pension reforms in developed countries is to achieve a balanced equity between financial stability and the pension amount relative to average earnings, the primary goal of most developing countries is to increase coverage and expand sources of financing for pension programs through pension insurance for the working population. If in North America and Europe, the coverage rate is 95 and 88 percent of the economically active population, according to ILO data, this indicator is 47 percent, which is due to the high level of informal employment (underground economy) in Latin American countries, as well as the fact that a significant portion of the working population still experiences financial hardship, especially in South Asian countries.

Given demographic changes in the implementation of pension reforms, the development of savings-based pension programs to increase the retirement age and individual interest in pension insurance is one of the important objectives in the context of today's changes.

# CONCLUSIONS AND RECOMMENDATIONS

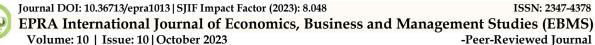
Japan

In the context of today's demographic changes, the main goal of pension reforms being implemented worldwide is primarily focused on protecting the segment of the population in need of social security from poverty, providing a guaranteed and sufficient retirement pension to ensure a dignified life upon reaching retirement age, and improving the standard of living for the population. Given the average life expectancy, retirement age, and other factors to prevent the impact of demographic changes on the pension system in the future, we consider it advisable to implement the following measures:

- Introduction of non-state pension funds, as well as ensuring that the needs of the elderly population are met through the development of medical insurance funded not by the state but, conversely, by their accumulated assets or income;
- Transition from a pension system based on the "intergenerational solidarity" principle to a pension system based on mandatory and voluntary personal insurance through a pension savings system;
- When introducing mandatory insurance contributions, it is also necessary to equate the amount of insurance contributions paid during one's working life to the size of the pension received from retirement until the end of one's life, resulting in an increase in the required length of working experience needed to qualify for a pension, thus ensuring actuarial fairness.

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