



New Population Projection for Japan

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The National Institute of Population and Social Security Research (IPSS) releases population projections for Japan every five years. The latest projections were released in April 2017, and these will be discussed in this article. The population projections announced earlier this year should serve as a basis for discussion regarding the outlook for Japan's society and regions as well as its economy.

Population Trends in Japan

The government projection suggests that the characteristics of changes that are likely to occur in a demographic structure in Japan could be summarized in four points. This is what experts have pointed out previously, but it looks as if their argument has been underscored by the latest government projections today.

The Population Projection for Japan is based on three alternative assumptions about future changes in both fertility and mortality (a low, medium, and high variant of each), resulting in a total of nine projections with one for each combination of these variants. In this article, I will focus on a projection reflecting combinations of medium fertility assumptions coupled with medium mortality assumptions.



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The first point refers to the declining trend in the total population of Japan. It has remained on a downward trend since 2008 and will continue declining for years to come. According to the latest projections, the total population of Japan will fall below 100 million in 2053 as opposed to 127.09 million in 2015, and it will drop further to as low as 88.08 million in 2065, which is fifty years from now.

The second point refers to the progress of declining birthrates. When experts talk about population, they usually split the total population into three categories, i.e. juvenile population (aged 14 or younger), working-age population (aged between 15 and 64), and elderly population (aged 65 or older). The declining birthrates that we are experiencing today should confront us as a decline in the juvenile population in the future. According to the latest projections, Japan's juvenile population will drop to as low as 8.98 million in 2065, from 15.95 million in 2015.

The trend in the number of children is largely determined by fertility assumptions. The latest projection assumes a fertility rate of 1.44 in 2065, almost unchanged from 1.45 in 2015. With the fertility rate remaining significantly below 2 as we see today, the number of children should keep diminishing and, consequently, the total population will decline in the coming years.

The third point is related to the aging population. According to the latest projections, the percentage of the elderly population (or the aging rate) is expected to rise to 38.4% in 2065 from 26.6% in 2015, suggesting that 1 in 2.6 people in Japan will be a senior citizen. This perhaps means that Japan is among those countries that are currently seeing rapid progress in the aging population. The high aging rate as expected by the government for 2065 is something that is unimaginable for us.

We must remember, though, that the number of elderly people in Japan will not grow significantly in the coming years. The government projection expects that the elderly population will be something like 33.81 million, which is almost unchanged from 33.87 million in 2015. This suggests that the reason for the progress of the aging population is not related to a rise in the number of senior

citizens, but that it is because the elderly population will remain the same in terms of size while the total population will diminish.

The fourth point is related to the diminishing working-age population, which is often referred to as the Population Onus. According to the latest government projections, Japan's working-age population will decrease to as low as 45.29 million in 2065 (representing 51.4% of the total population), down from 77.28 million in 2015 (representing 60.8% of the total population).

In fact, the population onus has begun influencing a large part of the Japanese economy and society significantly in many ways, including the intensifying labor shortage, decreasing household savings, the weakening basis of the social security system, and declining regional areas. It is expected that the population onus will have a negative impact on a larger scale in our society in coming years.

What we can learn from the population projections

Next, let us examine some of the points that have been made clear by the latest projections.

The projections have made it clear that there will be a significant change in the relationship between the productive population and retired senior citizens. We usually use Age Dependency Ratio (ADR) as a tool for analyzing the relationship between them.

ADR is a measure showing the number of elderly people as a percentage of those of working age. Assuming that the productive population and the elderly population serve as proxy variables for workers and retired senior citizens, respectively, ADR could be used as a measurement showing the ratio of working people to retired senior citizens.

According to the latest population projections, IPSS estimates that Japan's ADR will rise to 74.6 in 2065 from 43.8 in 2015. This suggests that there will be one aged dependent for every 1.3 workers in 2065, as opposed to one for every 2.3 workers in 2015.

The rising ADR will pose a serious problem for Japan in maintaining its social security system in the coming years, because the country has a social security system in which the population of the

working age group supports the elderly people in terms of the burdens of benefits. Japan's social security is based on a "pay-as-you-go" plan, and its sustainability as a social system tends to be directly affected by any change in the ratio of working people to retired elderly.

Let us examine the government's target of maintaining the country's population at more than 100 million. The latest projections estimate that the country's population will remain on a declining trend for years to come, falling short of 100 million in 2053 and even lower in later years. Given this estimate, the government's target looks unrealistic. In order for the government to achieve its population target, the government must obviously adopt measures to raise the fertility rate.

The latest population estimates adopt conditional projections, a set of quantitative simulations for analyzing the responses of future populations to the changes in the fertility rate assumptions in a mechanical manner. The results of the conditional projections suggest that it will take longer for the country's population to fall short of 100 million because the fertility rate will grow. According to the latest estimates, Japan's overall population should fall short of 100 million in 2015 with a fertility rate of 1.0. Japan will see its total population breaking the 100 million mark in 2047 (with a fertility rate of 1.2), in 2052 (with 1.4), and in 2057 (with 1.6).

The Japanese government aims to raise the country's fertility rate to 1.8. Based on this scenario, Japan will maintain a population size of 100 million or more until 2065, but it will see its population fall short of 100 million soon after that. With the fertility rate rising to 2.0, it will be possible to maintain a population size of 100 million even in 2115. If the rate goes up to as high as 2.2, Japan's overall population should surpass 100 million. These simulations suggest how challenging it will be for the government to achieve the 100 million population target.

Changes in the demographic structure in Japan, as I have discussed in this article, will happen in many countries in Asia sooner or later. It is my hope that Japan will demonstrate successful leadership in accommodating a range of issues caused by the demographic changes and offer good models of success for other countries in Asia.

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Born in 1947. Graduated from the University of Tokyo and joined the Economic Planning Agency (currently the Cabinet Office), Japanese Government. Served as Director General of the Research Bureau at the Agency and Director General of the National and Regional Planning Bureau at the Ministry of Land, Infrastructure, Transport and Tourism. Has served as Professor at Hosei University since 2003. His publications include “*Nihon keizai no kozotenkan (Structural reform of the Japanese economy)*” and “*Jinko fuka-shakai (Population onus society)*.”
