Mizuho Economic Outlook & Analysis

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The declining birthrate and population aging will reduce the labor force by 40.1%

Work-style reform holds the key to a higher labor force participation rate

< Summary >

◆ Japan's labor force in 2016 stood at 66.48 million, which corresponds to a labor force participation rate of 60%. Assuming that the labor force participation rates for each gender and five-year age groups remain constant, the labor force will decline by around 40% to less than 40 million in 2065 and the overall labor force participation rate will drop to about 50%.

◆ To maintain the overall labor force participation rate at the current level through to 2065, it is necessary to achieve the employment of the non-labor force population wishing to work but are not active job-seekers and, upon doing so, to raise the women's labor force participation rate to a level on par with men .

◆ Success in raising the labor participation rate will depend on the effective implementation of work-style reform, which includes creating work cultures and environments supportive of people receiving medical treatment and parents caring for children.

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1. Projections on Japan's population and labor force

(1) The over-65s are expected to reach 38.4% of the total population

On April 10, 2017, the National Institute of Population and Social Security Research released its projection on Japan's future population. Population projections are calculated based on census statistics released every five years, and the latest projection was compiled to reflect the release of the final results of the 2015 census data.

According to the 2017 population projection, the young-age population aged under 15 and the working-age population aged 15-64 are set to decline, while the old-age population aged 65 and older is projected to grow. The Institute's report also shows that the proportion of the over-65s in the total population (i.e., the population aging rate) will continue to increase and reach 38.4% in 2065, up from 26.6% in 2015 (**Chart 1**).

Taking into account the recent rise of the fertility rate of women in their 30s and 40s, the latest projection assumes that the total fertility rate[1] will take an upward trend. Consequently, the population aging rate is expected to grow at a somewhat slower pace than the previous projection released in January 2012 (39.9% in 2060). The previous projection estimated that the population aging rate would reach 38.4% (the population aging rate as of 2065 in the 2017 projections) in 2048. While the latest projection pushes back the timing of the population aging rate approaching the 38.4% mark by 17 years, the state of Japan's demographics remains unchanged that it will still have a high population aging rate (**Chart 1**).

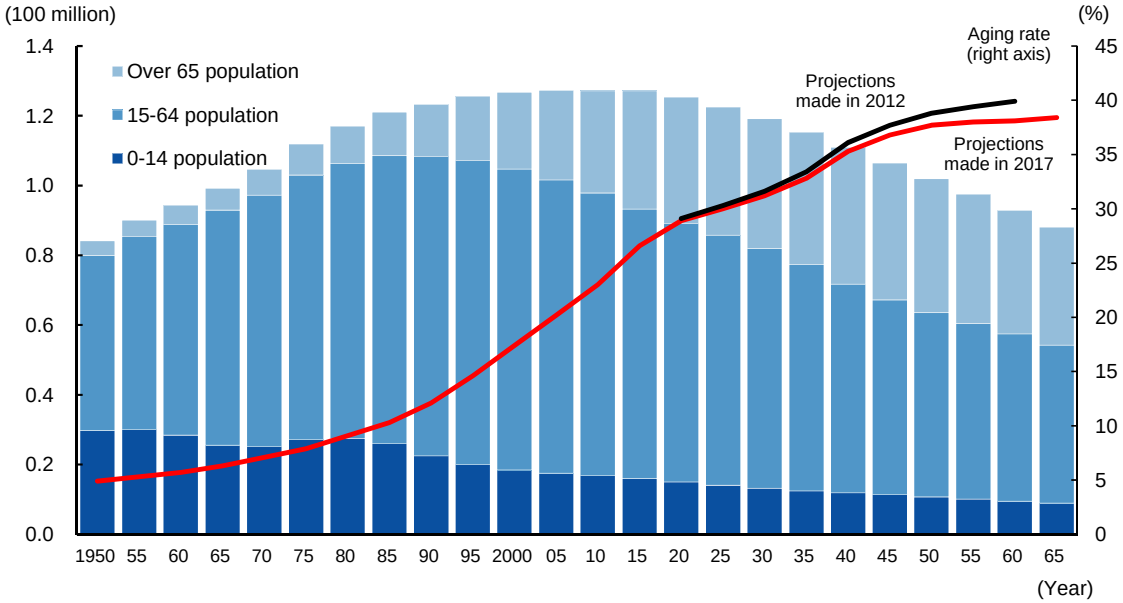
(2) The labor force will fall by 40.1% between 2016 and 2065

According to the *Labour Force Survey* (2016) of the Ministry of Internal Affairs and Communication (MIC), Japan's labor force stood at 66.48 million workers in 2016. Assuming that the labor force participation rates for each gender and five-year age groups (i.e., the percentage of the working-age population in the total population of each age group) remain unchanged from 2016 onwards, Japan will have, based on the 2017 population projection, an estimated labor force of 39.46 million in 2065, which represents a 40.1% fall from 2016 (**Chart 2**).

Note that the overall labor force participation rate will drop from 60.0% in 2016 to 49.9% in 2065 even if the gender-specific and age group-specific labor force participation rates remain at the 2016 levels, as the population aging rate will accelerate in the years ahead (**Chart 2**).

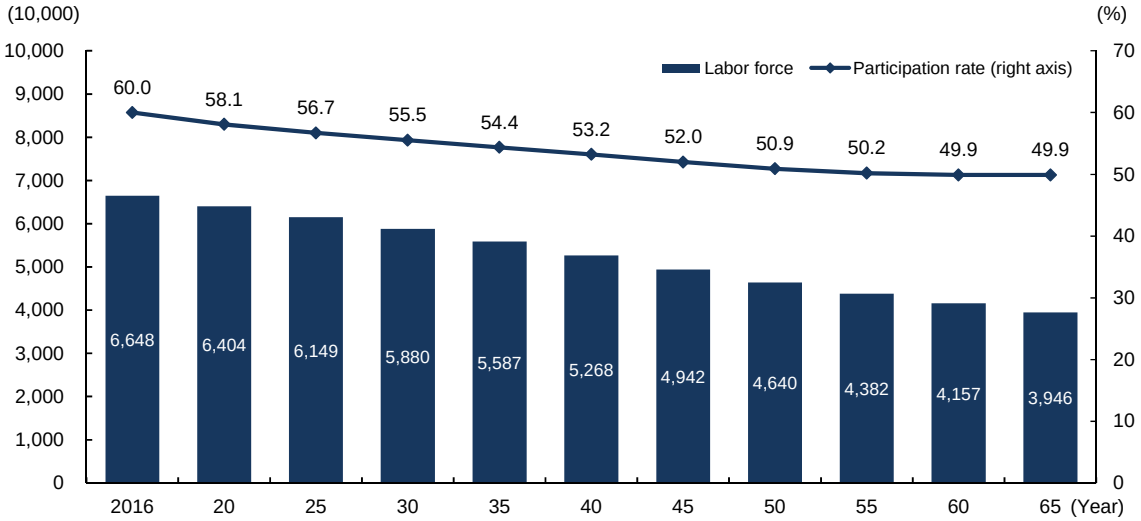
[1] The sum of age-specific fertility rates of women ages 15 to 49.

Chart 1: Population and aging rate (trends and outlook)



Note: Data to 2015 are actual results; data for 2020 and beyond are projections.
Source: Made by MHRI based on the Ministry of Internal Affairs and Communications, *Population Census* (1950-2015) and the National Institute of Population and Social Security Research, *Population Projections for Japan* (January 2012 and April 2017).

Chart 2: Labor force and labor force participation rate (outlook)



Note: Data for 2016 is actual results. Data for 2020 and beyond are calculated assuming the gender-specific and age-group specific labor force participation rates are equivalent to the corresponding 2016 labor force participation rates (The 2016 labor force participation rate for the age group 75 and older is used to calculate the projection for the age group 75-79; the projection for 80 and over assumes the labor force participation rate is zero).
Source: Made by MHRI based on the Ministry of Internal Affairs and Communications, *Annual Report on the Labour Force Survey* (2016) and the National Institute of Population and Social Security Research, *Population Projections for Japan* (April 2017).

2. The non-labor force population possessing the desire to work

(1) 8.6% of the non-labor force population wish to work

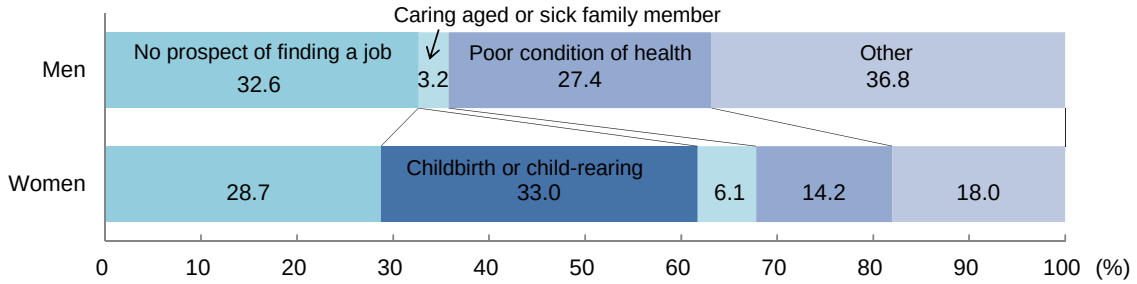
MIC's Annual Report on the *Labour Force Survey* shows that, of the 44.18 million people who are not part of the labor force in 2016, 3.8 million (1.06 million men and 2.74 million women), or 8.6%, are not searching for work even though they wish to do so. Even though the non-labor force population wishing to work exceeded five million in the early part of the first decade of the 21st century, accounting for a little over 12% of the non-labor force population, the figure has gradually decreased from the year 2004 onwards.

Oft-cited reasons for not actively seeking employment despite their desire to work are "no prospect of finding a job" (32.6%) and "poor condition of health" (27.4%) for men, and "childbirth or child-rearing" (33.0%) and "no prospect of finding a job" (28.7%) for women (**Chart 3**).

(2) A gap exists between the actual and simulated labor force participation rates

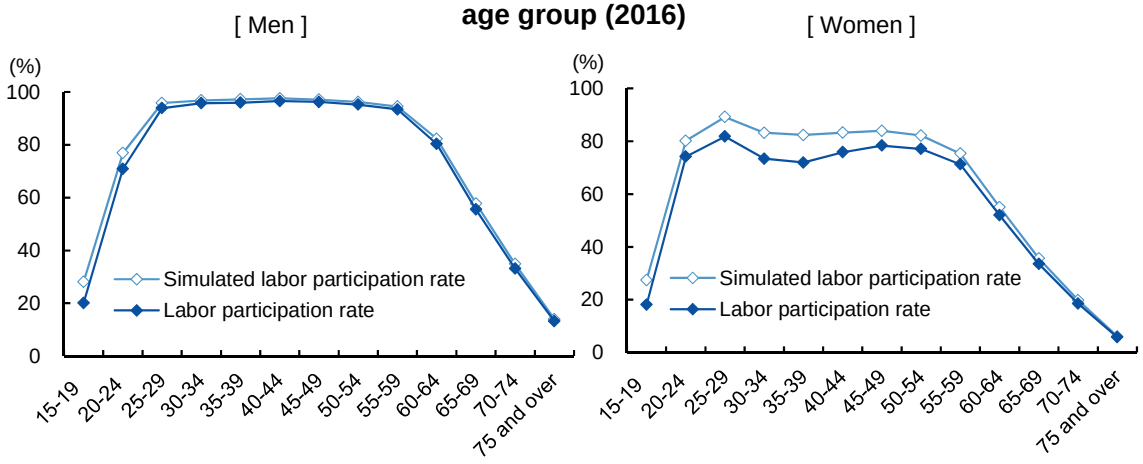
We compared the gender- and age group-specific labor force participation rates in 2016 with the labor force participation rates that assume all of the non-labor force population with the desire to work are part of the labor force (i.e., the "simulated labor force participation rate"). For men, there is a small gap between the actual and simulated labor force participation rates for the younger generations and the 60s age group (**Chart 4**, left). For women, in addition to the gaps found for the same age groups as men, a clear disparity is also evident in the late 20s to 50s age groups (**Chart 4**, right). No disparity exists for the corresponding age groups of men. The disparities are especially wide for women in their 30s, with the simulated labor force participation rate exceeding the actual labor force participation rate by 9.8 percentage points for 30-34 year olds and 10.5 percentage points for 35-39 year olds.

Chart 3: Reasons for not actively seeking employment despite the desire to work



Source: Made by MHRI based on the Ministry of Internal Affairs and Communications, *Annual Report on the Labour Force Survey* (2016).

Chart 4: Labor force participation rate and simulated labor force participation rate by age group (2016)



Note: The simulated labor force participation rate is the number of employed and unemployed with a desire to work as a percentage of the population.
Source: Made by MHRI based on the Ministry of Internal Affairs and Communications, *Annual Report on the Labour Force Survey* (2016)

3. What happens to the labor force if the entire non-labor force population with the wish to work find employment?

(1) The labor force participation rate will increase by 3.5 percentage points to 63.5% if all who wish to work find work

The overall labor force participation rate in 2016 would have increased by 3.5 percentage points to 63.5% if all of the 3.8 million non-labor force population with the desire to work had joined the labor force.

(2) Achievement of the simulated labor force participation rate will push up the overall labor force participation rate to 52.7% in 2065

Using the population projections we estimated the labor force in 2065 assuming the non-labor force population with the desire to work joins the labor force. As mentioned before, the labor force in 2065 is projected to fall to 39.46 million (2065 (1) of **Chart 5**) if the gender- and age-group specific labor force participation rates hold at the 2016 levels, but the figure rises to 41.65 million if calculated based on the simulated labor force participation rates in 2016 (2065 (2) of **Chart 5**).

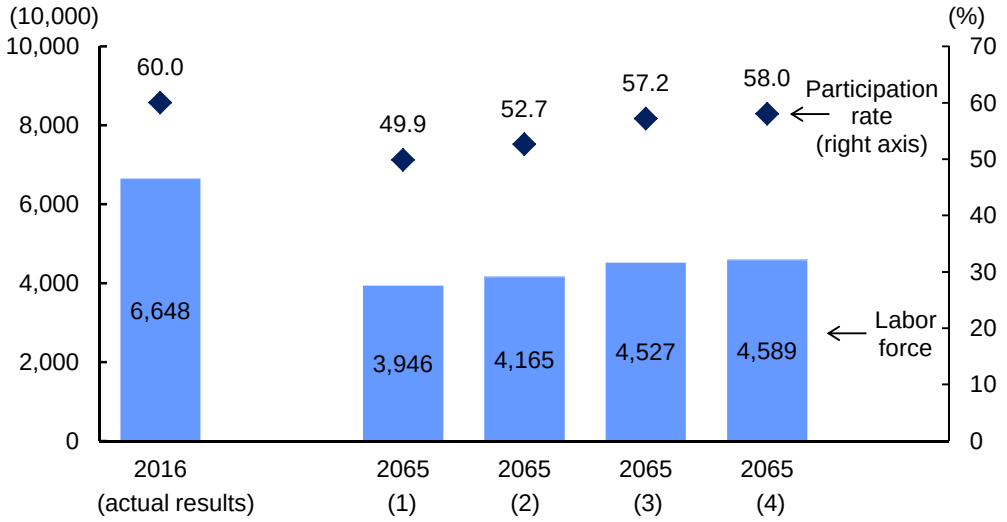
Now let us focus on the labor force participation rate projections. If the gender- and age group-specific labor force participation rates hold at the 2016 levels, the overall labor force participation rate for 2065 is projected to be 49.9%; but the figure will rise, albeit only slightly, by 2.8 percentage points to 52.7% if the simulated labor force participation

rates are used for the calculation. Even if the simulated labor force participation rates are achieved, however, the projected overall labor force participation rate for 2065 will still drop by 7.3 percentage points from 60.0% in 2016.

(3) The labor force participation rate in 2065 will increase to 57.2% if the women's labor force participation rate climbs to a level on par with men

The labor force participation rate in 2065 will near the 60% mark achieved in 2016 if the women's labor force participation rate is brought up to the men's rate. Namely, the labor force in 2065 would be 45.27 million and the labor force participation rate 57.2% if the 2016 gender- and age group-specific simulated labor force participation rates were applied for men and the actual labor force participation rates of men in 2016 were applied for women (2065 (3) of **Chart 5**).

Chart 5: Labor force and labor force participation rate



Note: 2065 (1): Gender- and five-year age group-specific labor force participation rates are equivalent to the 2016 rates.
2065 (2): Gender- and five-year age group-specific simulated labor force participation rates are equivalent to the 2016 rates.
2065 (3): Gender- and five-year age group-specific simulated labor force participation rates are equivalent to the 2016 rates for men, the men's 2016 labor force participation rates for women.
2065 (4): The labor force participation rates for both men and women are equivalent to the men's simulated labor force participation rates in 2016.

Source: Made by MHRI based on the National Institute of Population and Social Security Research, *Population Projections for Japan* (April 2017) and the Ministry of Internal Affairs and Communications, *Annual Report on the Labour Force Survey* (2016).

Furthermore, if the men's age group-specific simulated labor force participation rates in 2016 are used for both genders to determine the labor force in 2065, the figure would be as high as 45.89 million and the labor force participation rate 58.0% (2065 (4) of **Chart 5**).

In sum, merely putting people who wish to work into employment will not be sufficient to maintain the current labor force participation rate into the future. It will also be necessary to raise the labor force participation rate of women to a level on par with men.