The Causes and Consequences of Depopulation in Japan

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1. Background and Purpose of Study

This study focuses on Japan as a precursor case of the worldwide depopulations expected in the near future, looking for causes and consequences of the First and Second Demographic Transition (FDT/SDT) in a long-term perspective.

The total population of Japan (including non-Japanese residents) reached a peak of 128.08 million in 2008. Then, it began to undergo a long period of population decline. According to the 2015 Population Census, it recorded 127.27 million, 0.98 million fewer than the number of the last Census. Demographically it means that Japan loses one megacity with over a million people every 5 years. Above all, the working age population between 15-64 is rapidly decreasing, by over 10 million from 87.16 million at the 1995 Census to 76.29 million at the 2015 Population Census（IPSS 2017a).People in Japan are already feeling the impacts of rapid depopulation on their daily life. (Fig.1)

2. Japan as a Precursor Case of Depopulation

The United Nations projected that the world's population is expected to grow from 7.7 billion in 2019 to 10.9 billion in 2100 (a 40% increase) (United Nations 2019). However, if we take a closer look at this growth, most of the increase (about 80%) is expected in Sub-Saharan Africa. In most other regions, population growth will continue but only the elderly (65+) will increase, while working-age adults (15–64) and children (0–14) will decrease. Therefore, following Japan, the EU, China, and most countries are expected to undergo a long period of population decline by 2050. In fact, almost one-half of the world's population lives in countries in which the total fertility rate (TFR) is below the replacement level (Frejika 2017). The lowest fertility is no longer a Japanese monopoly. In East Asia, Taiwan, Singapore, Korea and China, the fertility decline is unstoppable. Even after cancellation of its one-child policy, China's TFR will continue to drop, partly as an impact of Covid-19. China's population would begin to decrease from 2022.

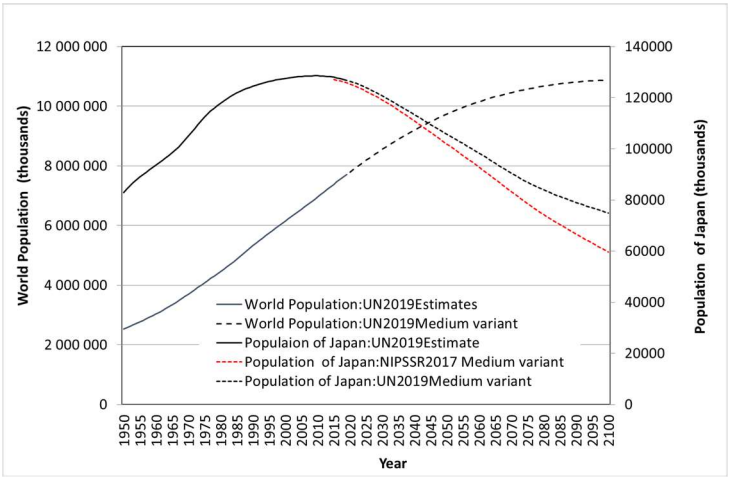

Figure1: Long term Population development of Japan

3. Population Dynamics of Japan

From 1950 to 2018, the population dynamics of Japan, depending mainly on natural dynamics (live births and deaths) and social dynamics (immigration and emigration), have been limited in scale (except when Okinawa reverted to Japan in 1971). Since 2007, the natural dynamics turned negative and total population is shrinking continuously. On the other hand, around 2012, the social dynamics (immigration) began to increase, which makes the population decline slightly weaken.

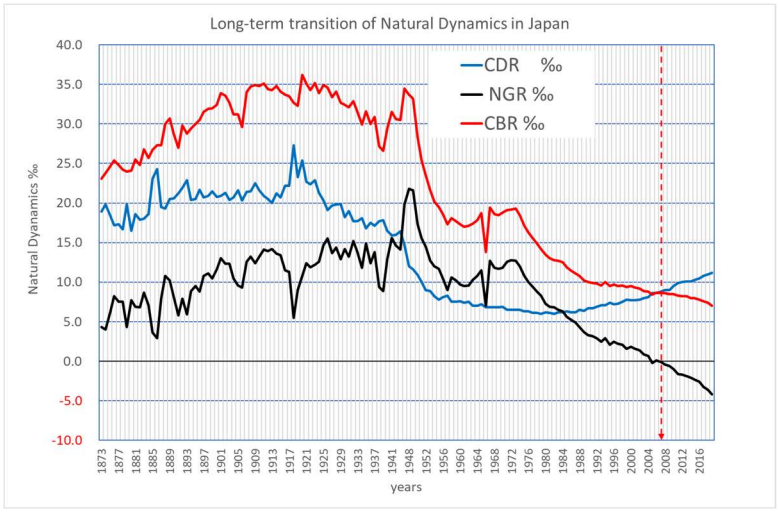

Figure2: Long Term Development of Natural Dynamics in Japan

Further, the natural dynamics (CBR: crude birth rate, CDR :crude death rate, NGR: natural growth rate) over the very long term, from 1873 to 2019, show the First Demographic Transition (FDT) from high fertility and mortality to low fertility and mortality and the Second Demographic Transition (SDT),where the natural dynamics turned negative (as a result of low fertility and aging) and depopulation began. (Fig.2)

3.Causalities of Demographic Transition (FDT, SDT)

The FDT in Japan started with modernization from the Meiji Era and continued to the mid-1970s. The growing social capital and social product extended the average life span of women from 50 to over 70 years, thus the survival rate of women at the end of their reproductive period rose from 50 % to nearly 100 %. As a result, the replacement level of fertility was reduced from 4 to 2 children. The higher risk of having too many children promoted birth control to keep TFR within replacement level. (Fig.3).

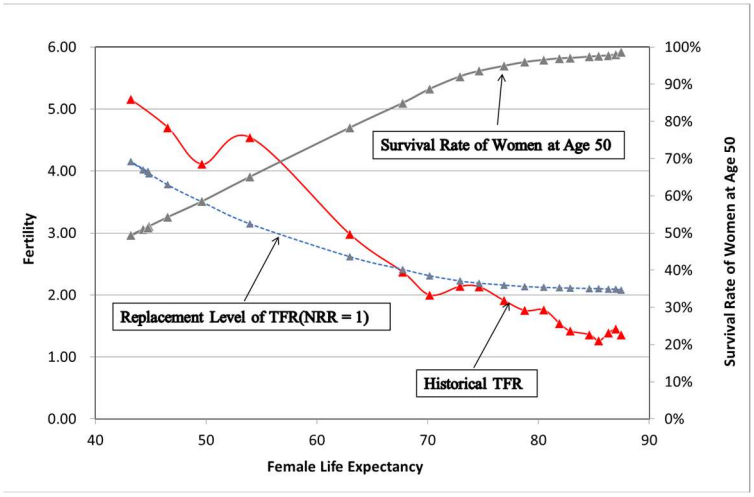

Figure3: Women's life expectancy and fertility change

The **SDT** in Japan was caused by the shift of reproduction to a higher age. With the liberalization of marriage behaviors*, late marriage and late childbearing was promoted. The reproductive period of women was cut back and, as a result, marriage couples became rarer, and childless couples or with only one child are more usual. Conversely, the multiple child household is vanishing. Thus, TFR stays far bellow replacement level.

*Above all, the social norm on marriageable age (Kekkon Tekireiki in Japan, which pressured women to marry before 24 years old), evaporated.

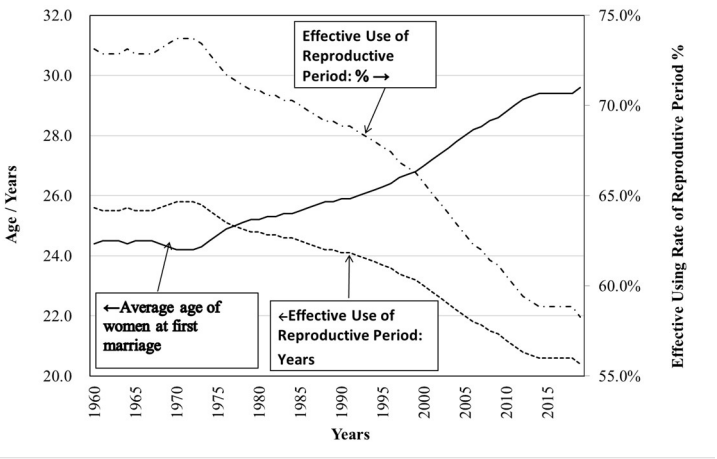

Figure4: Timing Shift of Marriage and Effective Use of Reproductive Period

Other causes of depopulation are undeniable. But the two Demographic Transitions (FDT/SDT) are common also to different regions and socio-economic stratifications as in Japan.

4. Consequence: social, economic, and political issues

With a gradually increasing population, population growth itself promotes social capital accumulation and social production, thus the problem solving of social, economic and political issues is relatively easy to perform (expansion of the pie or trickle-down effects). In contrasts, a gradually decreasing population is hindering social capital accumulation. We must reorganize our social, economic and political system to adjust for a shrinking population scale (diminishing pie or sucking up effects).

With decreasing population, the reduction of social demands is inevitable, and the cost performance based on large-scale population will loosen. To sustain living standards, the continuous improvement of productivity is needed. This changes labor demands among industry sectors and human service sectors, both in quantitative and qualitative aspects. Increasing diversity and inequality in income distribution is expected. In addition, there are numerous other issues, such as the maintenance and updating of infrastructure with diminishing residents, changes in natural environment caused by depopulation, acceptance, and support for increasing migration.

With decreasing population, the reconciliation of different interests by gender, age, social stratification, and urban/rural regions will be far more difficult, among the small population groups or individuals which are geographically scattered but are electronically linked with social media. Decision making and consensus building need more time and efforts than ever.

Depopulation and its related problems in Japan will continue for a long time because they are consequences of a demographic transition as a historical process. We could not stop this demographic process and should not try to stop it abruptly. Instead, we need to adjust our social, economic, and political system gradually to manage a decreasing population.

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