Establish National Targets to Halt Population Decline
Follow France's Example and Stabilize Population at 90 Million[i]

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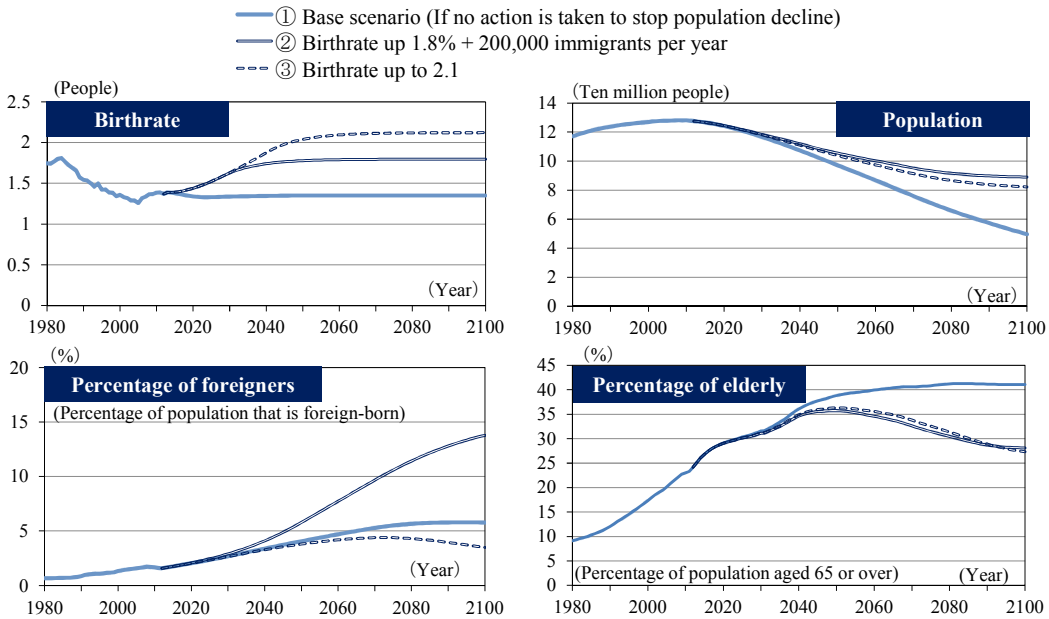
Overview

Japan is likely to tip into fiscal collapse due to rising tax and social security burdens in the future, or Japan's standard of living is likely to erode. At the root of the problem lies population decline. If no action is taken, the population will shrink to 30% of its present size in 100 years and to around 10% of its current size in 200 years, and Japan's presence in the international community will gradually diminish. To avoid such a situation, the Japan Center for Economic Research proposes the establishment of national population targets, aimed at raising the birthrate over the course of forty years and maintaining a stable population of 90 million. We propose combining this with a policy of opening up Japan and inviting people, expertise and investment from overseas.

■ Fig. 1 Halt population decline and aging



Source: JCER estimation. ① is comparable with the mid-range scenario of the National Institute of Population and Social Security Research. ② is the case where, toward 2050, the birth rate is raised to 1.8 and 200,000 immigrants (equal to around half of the UK's intake in proportion to population) are accepted per year, and ③ is the case where the birth rate is increased to 2.1 toward 2050 and the intake of foreigners is kept at the current level.

◆ Reality of population decline
--Fear of decline in standard of living due to heavy burden

The fertility rate in Japan today is 1.4 children per woman mother. The population of the new generation will shrink to approximately 70% of the parent population. If this trend continues, the population will decline to 30% of its present size in 100 years and around 10% of its present size in 200 years. Japan is a society with a large proportion of elderly people where one in four is a latter-stage elderly person aged 75 and over and where, at the same time, the population continues to shrink.

The chances of the standard of living falling due to rising tax and social security burdens are high. The decline in the number of workers undermines the sustainability of the government debt and, if the heavy burden becomes untenable, there is also every possibility of fiscal bankruptcy. Even if growth picks up, the structure in which the working generation shoulders a heavy burden will not change. To avoid such a situation, the public and private sectors must work together to create a society that overcomes the falling birthrate problem while keeping women in work.

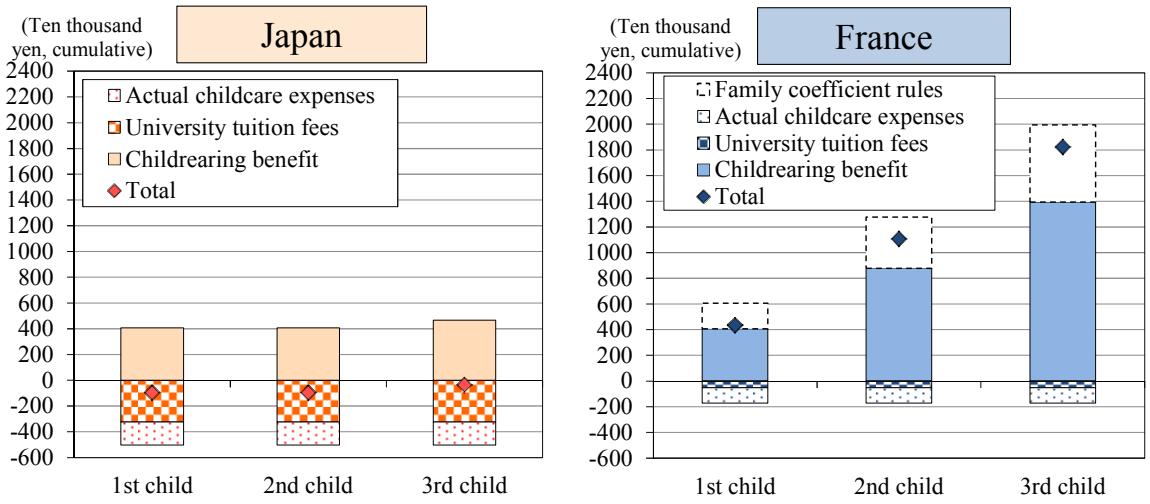
◆ Establish population targets (1)
-- Raise the birthrate through French-style policies

The first step in a new phase of reforms never before attempted is to establish national population targets. Japan must put in place and financially support a childcare system that makes it easy for women to raise more than one child if they so wish while demonstrating their talents in the workplace. Analysis of the relationship between the birthrates and childrearing policies of thirty major countries shows that Japan could raise the birthrate from its present level of 1.4 to around 1.8 by 2050 if it expanded and improved benefits and childcare subsidies at an annual rate of 1.5% of gross domestic product (GDP) (increase of 7–8 trillion yen) to a level comparable with France, which overcame low birthrates[ii]. It took thirty years from the time France introduced work-life balance policies in earnest for France's birthrate to approach 2. Japan must also commit to such policies according to a long-term plan.

France put in place initiatives to make it easier to balance raising a child and work, and to cover childrearing costs through (1) various childcare options and public subsidies for each, and (2) a system of benefits and income tax breaks that are more generous the higher the number of children[iii]. The amount of benefits paid until a child reaches adulthood is at least 10 million yen greater for the third child than for the first child (see Fig. 2). Supporting childbirth and childrearing so that women can have the number of children they wish does not constitute over-interference by the state.

■ Fig. 2 The higher the number of children, the more generous childrearing benefits

＜Main childrearing benefits (payments) until child reaches adulthood＞



Source: Comparison of main benefits and expenditures where there is a considerable difference between Japan and France. Expenses such as elementary and junior high school education expenses and cram school expenses are excluded. Cumulative amount until child reaches adulthood. France's childrearing assistance assumes use of the full amount. "Family coefficient rules" is an income tax initiative whereby the higher the number of children, the lower the income tax, and is figure assuming household with taxable income of 30,000 euro according to Takeshi Fujii (2007). Converted based on 2010 nominal exchange rate of 130 yen per euro. Data is produced by JCER based on evidence gathered locally, etc.

◆ Establish population targets (2)
-- Increase intake of immigrants to 200,000 per year

Besides raising its birthrate, Japan must also focus on the intake of immigrants as another one of the policies in its new phase of reforms. Though the intake of immigrants involves government expenditure, it also has the advantage of increasing tax revenues[iv]. If overseas human resources increase, productivity will also improve thanks to skills and ideas not found in Japanese workers, and this will doubtless provide the impetus for foreign investment in Japan. If Japan has immigrants take charge of nursing care and childcare, which are areas with enormous potential demand but insufficient manpower, the number of people that benefit will also increase.

Foreign students are the eggs from which highly skilled human resources hatch, and social friction can also be reduced. Immigration (via foreign students) is a strong option. In view of the size of the Japanese economy, it would not be surprising if the foreign student population was doubled its present size (138,000 students in May 2012). Rather than pursuing the introduction of lectures in English, Japanese universities should endeavor to attract students by pushing Japan's strengths - like its technologies - to the fore.

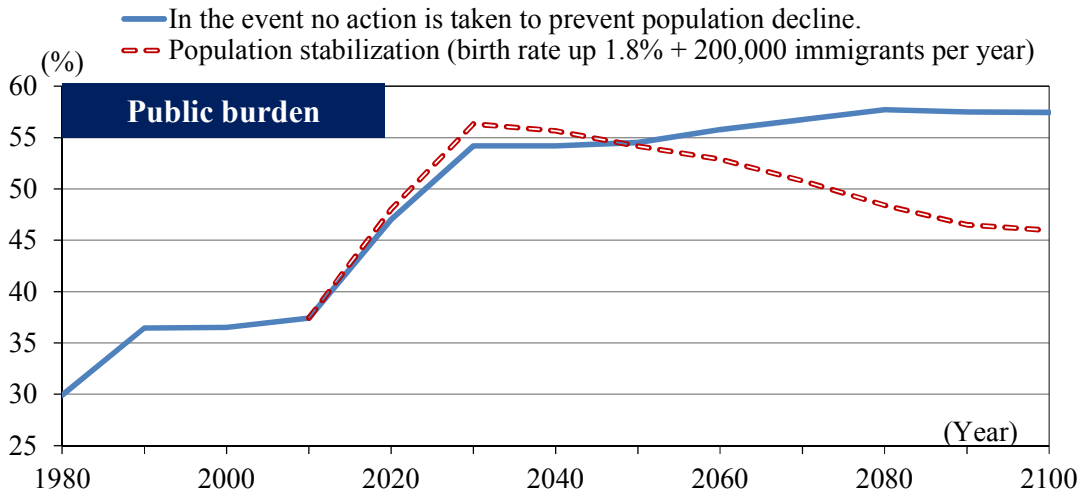
We propose Japan gradually increases its intake so that, from 2050 onwards, the net number of immigrants is 200,000 people per year. In proportion to population, this is equal to half the UK's present intake. In this case, the percentage of the population that is foreign-born will increase from its present level of 1.8% to 6% in 2050 and to around 13% in 2100.

◆ Establish population targets (3)
-- Achieve reversal of population aging from 2050

The combination of raising the birthrate to 1.8 and accepting 200,000 immigrants per year will halt population decline. The population will stabilize at 90 million from 2100. The percentage of the population that is elderly will stop rising and start to fall from around 2050 (see Fig. 1). The improvement and expansion of childrearing policies and the intake of immigrants will be accompanied by a fiscal burden and a certain degree of social friction. However, such expense is investment for the future and will soon be returned when the number of workers increases. The public burden will increase towards 2030 in the case where

Japan seeks population stability (an extra 3% in the case of consumption tax), but will then start to fall and become lower than the case where no action is taken to prevent population decline from 2050 (see Fig. 3). By 2100, the public burden will fall to 45% and the tax and social security system will stabilize.

■ Fig. 3. Public burden will decline due to population stability

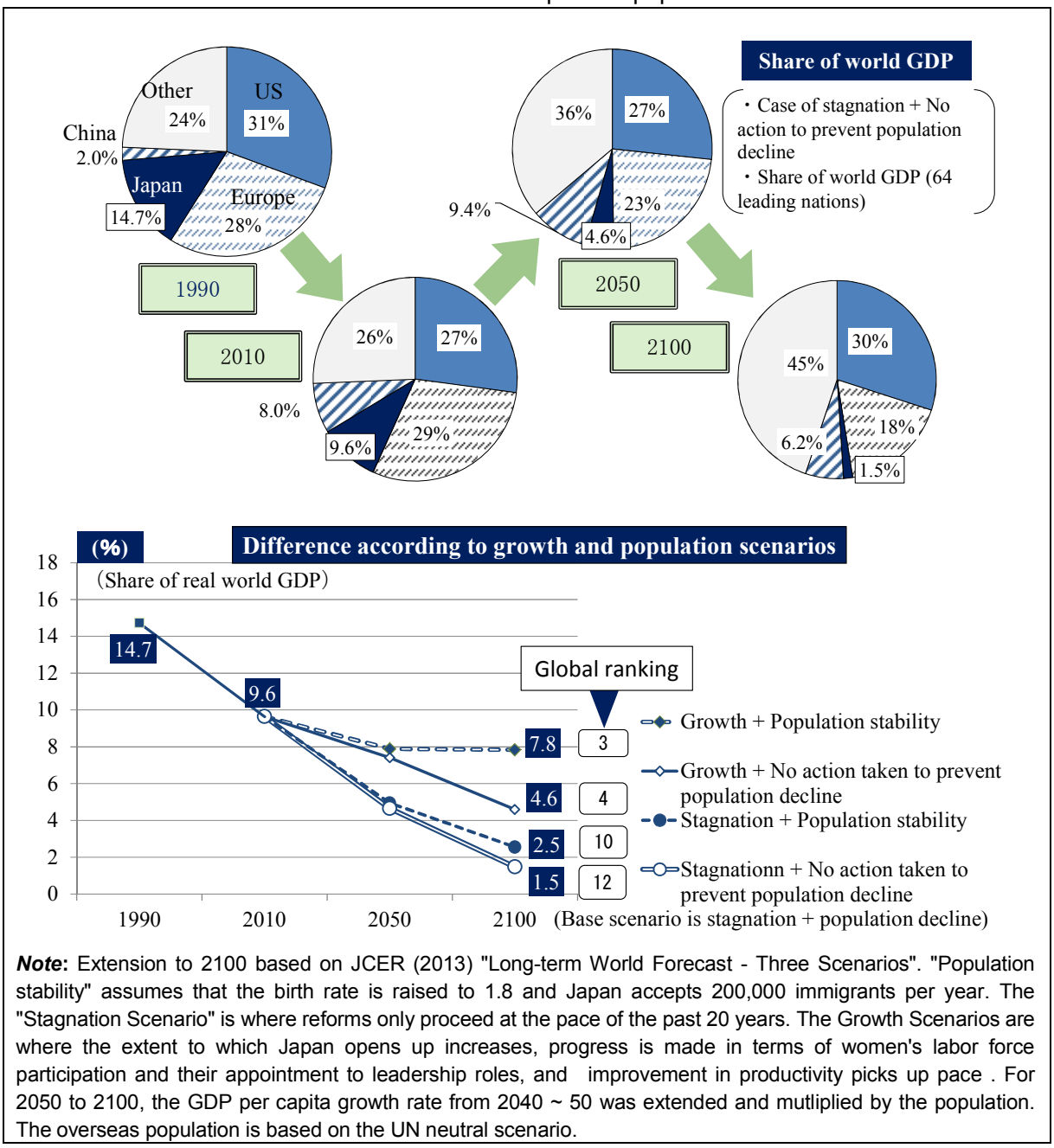


***Note*:** Both cases are based on the scenario where growth accelerates as a result of system reforms. In the Stagnation Scenario, the burden would be higher. The fiscal burden to increase the birth rate (family allowance) is taken into account. Assumes that toward 2030, consumption tax is raised to 25%.

If no action is taken to prevent population decline, the Japanese economy's presence in the international community will gradually diminish. An examination of share of world GDP (64 countries) shows that while Japan accounted for a share of around 15% in 1990 during the bubble economy years, in the case of the Stagnation Scenario[v], Japan's presence will diminish to around one tenth of its former size in just over 100 years, with its share shrinking to 4.6% in 2050 and 1.5% in 2100 (see top part of Fig. 4). Its presence in proportion to the United States will shrink from around 50% in 1990 to one twentieth of that level in 2100. China's presence will also stop rising steadily as it will also experience population decline in the future, but even so it will still be

four times that of Japan in 2100. Japan will fall to twelfth in the global rankings. Under such circumstances, it will no doubt become difficult for Japan to negotiate with the United States and China on an equal footing.

■ Fig. 4 Japan's economic presence will shrink to one tenth of its present size if no action is taken to prevent population decline



Note: Extension to 2100 based on JCER (2013) "Long-term World Forecast - Three Scenarios". "Population stability" assumes that the birth rate is raised to 1.8 and Japan accepts 200,000 immigrants per year. The "Stagnation Scenario" is where reforms only proceed at the pace of the past 20 years. The Growth Scenarios are where the extent to which Japan opens up increases, progress is made in terms of women's labor force participation and their appointment to leadership roles, and improvement in productivity picks up pace . For 2050 to 2100, the GDP per capita growth rate from 2040 ~ 50 was extended and mutliplied by the population. The overseas population is based on the UN neutral scenario.

In the Growth scenarios, Japan will be able to maintain a 4.6% share of world GDP in 2100, but it will still be the land of the setting sun (see the bottom part of Fig. 4). However, if Japan were to

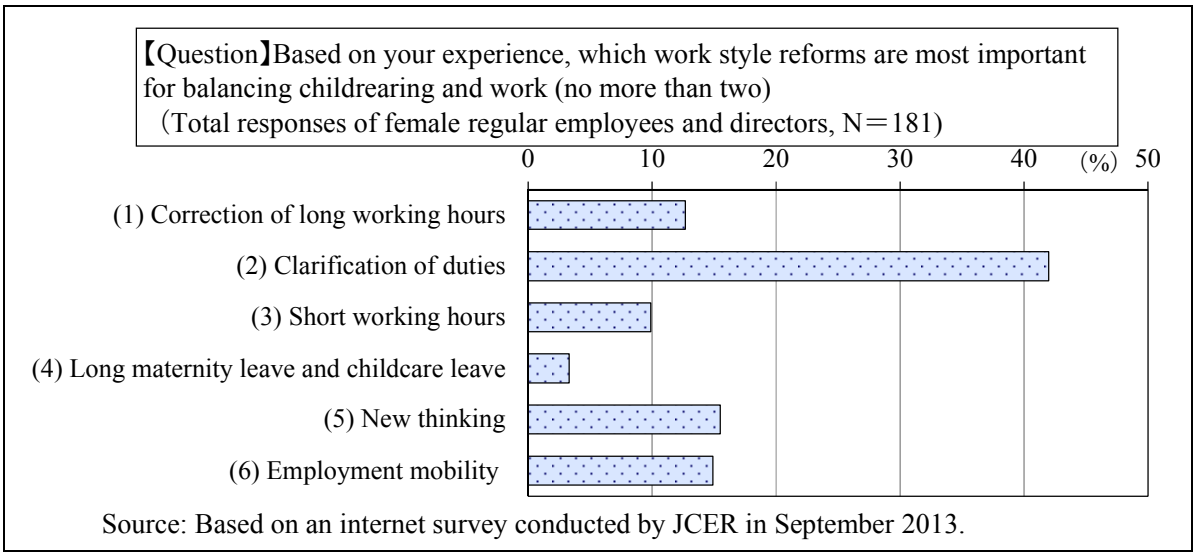
stabilize its population, the Japanese economy would account for around 8% of world GDP in 2100, making it the third largest economy in the world and enabling Japan to maintain a voice on the world stage.

Fully exploit the potential of women and foreigners

◆ Early appointment to managerial position effective towards a quota system

The third step is to put in place initiatives that enable women to balance work and raising children. The continuation of work is also important to secure the income necessary to raise more than one child. Enterprises should start by trying to achieve the "early appointment" of women. In most cases, women who were entrusted with work at an early stage and achieved results continue to work even after giving birth and raising children. In Japan, the percentage of women in leadership roles, for example, those serving as company directors or in managerial positions, is noticeably low compared with overseas. "Early appointment" increases women's motivation and is also effective as a first step towards a quota system to establish numerical targets for the appointment of women. In Japanese society, where the employment system and assessment structure have been established around men, the aim of such treatment is to make conditions which are disadvantageous to women at least equal to those of men, and it does not constitute favorable treatment for women.

■ Fig. 5 Balancing work and raising a child is easier if duties are clarified



Source: Based on an internet survey conducted by JCER in September 2013.

◆ Duty-based employment hold the key

At the same time, “clarification of duties” is the keyword. According to a recent survey conducted by the JCER, the number of respondents wanting clarification of work content as a measure to support a balance between child rearing and work exceeded those wanting correction of long working hours. This suggests that women judge that they will be able to adapt to slightly longer working hours to a certain degree, provided it is possible to predict when work will be busy and slack.

Duty-based employment is also an effective way of harnessing the abilities of foreigners. Japanese employment contracts have few stipulations on duties compared with those of overseas countries. Typical contracts for simultaneously recruited graduate employees are often nearly blank when it comes to the kind of work they will do. Unlike Japanese male employees who work until mandatory retirement age and can expect reward in any case, foreigners often change the companies and countries where they work every two or three years in the hope of career advancement. Such foreigners are more likely to demonstrate their abilities with a short-term employment contract clarifying the work to be assigned and remuneration (assessment).

The foreign students that Japan has gone to the trouble of inviting over cannot demonstrate their abilities if they are treated in the conventional way, that is, starting by treating them all the same and getting them to do anything, and they might end up leaving Japan without having a good impression. Duty-based employment would also help to change the system of assessment of regular male employees which assumes long working hours, and, as a result, is likely to bring about a positive cycle of male participation in child rearing-->facilitation of the career advancement of women-->growth in labor force-->enhancement of growth potential.

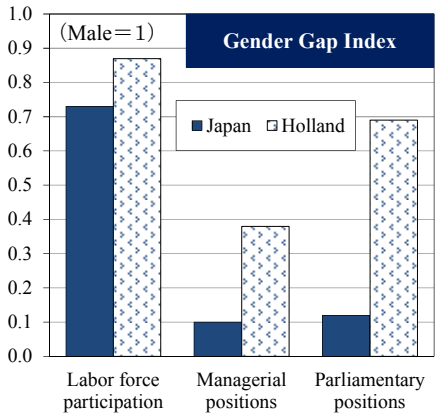
The key to changing the style of working is to change the thinking of senior management and managers and to take another look at their roles. At Japanese enterprises in the past, it was usual to allocate work to “employees who look available” and “employees who appear to have free time” there and then. While this has the advantage of making it easier to deal with an emergency, it also tends to bring about long working hours. This is because employees who are able to comply with this are assessed as being “useful.” However, if short-term, duty-based employment increases, it will be important to (1) clarify the necessity and prioritize the order of work, and (2) consider in advance what kind of action will be taken if the business environment changes or in the event of an emergency. People management will also probably be much more complex. Managerial positions that do the same job they did yesterday will no longer be sufficient. There are already some enterprises that have established numerous managerial positions to deal with the appointment of women. Management functions will need to be powered up.

According to the Gender Gap Index (published by the World Economic Forum), which measures the social participation of women compared to men, Japan is currently woefully low in the world rankings, down at 101st. We should follow the example of the Netherlands with respect to the women’s active role. They have produced an advanced employment framework including “the same wage for the same job” principle. They promoted rapidly the rate of female labor

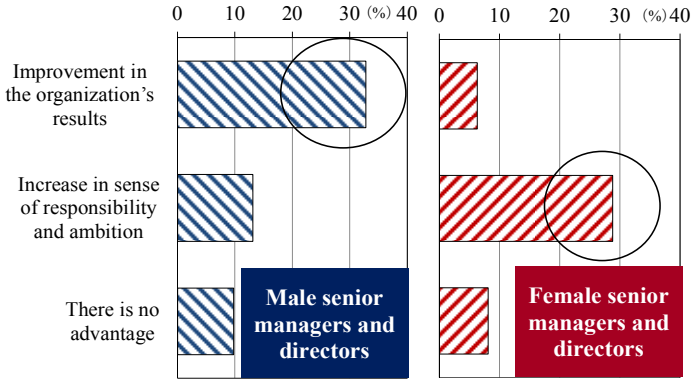
participation for the last 20 years and now enjoy 50 thousand dollars in its per capita GNI.

We propose introducing targets for the appointment of women (quotas) : raise the number of women in managerial positions to 40%, and the number of female Diet members to 70% of the number of their male counterparts respectively, thereby bringing both in line with the present levels in the Netherlands (see Fig. 6). According to survey results, few respondents take a negative view toward the quota system.

■ Fig. 6 Increase the social participation of women to levels seen in the Netherlands through a quota system



Source: World Economic Forum
"The Global Gender Gap Report 2012"



Source: An internet survey conducted by JCER in September 2013

Activate university-based innovation – combined with employment system reform

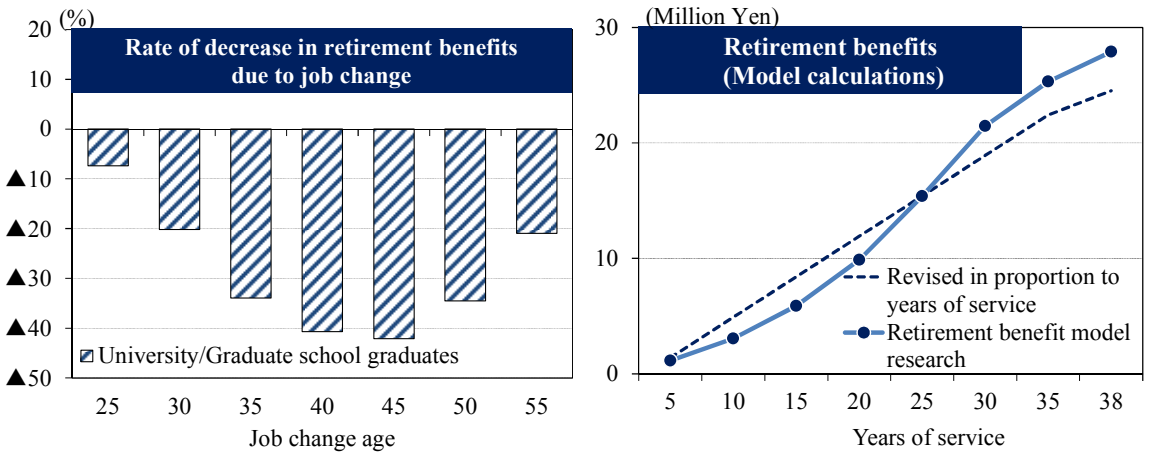
◆ Human resources retained within enterprises and post-docs

One of the main objectives of working-style reforms is to create innovation. Japan is trailing behind not only the United States but also South Korea and leading European countries in venture generation to create new industries. This is because Japan has not used its human resources efficiently. More than 4,000 people with PhDs are unable to find work every year and corporate overemployment is also estimated at 4 million. If the generation of new ventures increased, this would provide an opportunity for the effective utilization of such human resources. As in the case where an engineer who left a leading Japanese electronics company is invited to join an enterprise in South Korea or China, for example, the utilization of contacts and know-how — though difficult within a large enterprise — is likely to be possible within a venture enterprise. Also for post-docs who are struggling to find work, venture enterprises represent a chance that will open up new avenues. Even if the human resources capable of developing technologies or business models to serve as the seeds of new ventures will only be produced according to probability theory, staff to support them will be required and, in Japan today, such human resources are buried within its

enterprises.

Here too, it is necessary to change the nature of employment. The twenty-year employment system for graduate recruitment proposed in our interim report is one solution. Retirement benefit programs and suchlike based on the present lifelong employment system, though effective as a means of retaining human resources, put a burden on enterprises grappling with overemployment, and it may be necessary to consider introducing a twenty-year-employment system at the same time as the switchover to a quota system and duty-based employment.

■ Fig. 7 Retirement benefit programs are an obstacle to career moves

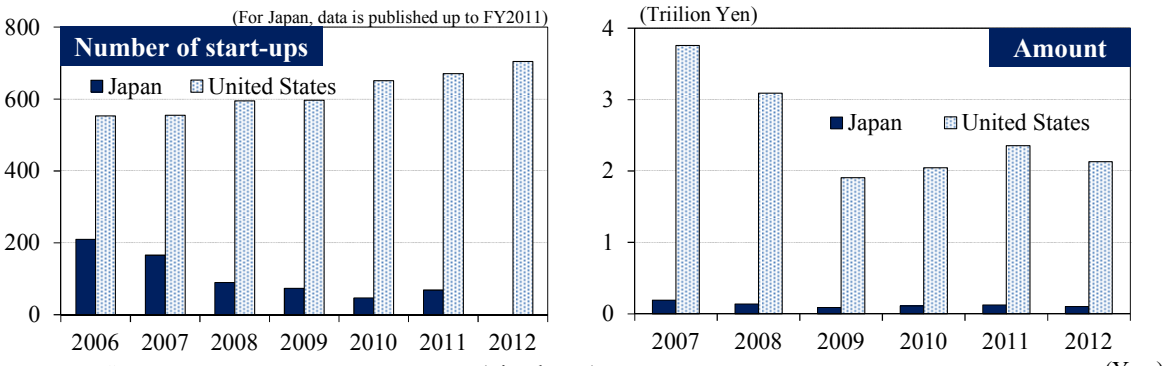


Source: Produced by the JCER based on "Useful Labor Statistics 2013" published by the JILPT, and "General Survey on Wage" published by MHLW

Even if the twenty-year employment system is not introduced straight away, it might be an idea to make a start on the review of retirement benefit programs. For example, many Japanese corporations would see a large reduction in retirement benefits if employees were to leave the company before they reach their mid-forties, and employees leaving in their fifties could receive relatively advantageous retirement benefits (service of thirty years or more on the retirement model research line on the right side of Fig. 7). We suggest that switching to a program of retirement benefits that are fully proportionate to years of service would be a good place to start.

The nature of academia-university cooperation is also in need of reform. Japan's progress in establishing initiatives so that universities can embark on business in collaboration with enterprises was on a par with that of the United States from the mid-1990s. Japan also has the angel tax system of special incentives for the promotion of investment in venture businesses. However, whereas in the United States, the number of new start-ups per year continued to rise even after the Lehman shock, in Japan, growth in new start-ups was slow from before the Lehman collapse, and the two countries are on different paths. According to our Long-Term World Forecast to 2050, the ease of venture generation is considered to be one factor that determines growth. A difference in venture investment could well lead to a difference in national vitality (see Fig. 8).

■ Fig. 8 Difference in venture investment makes a difference to Japan's vitality

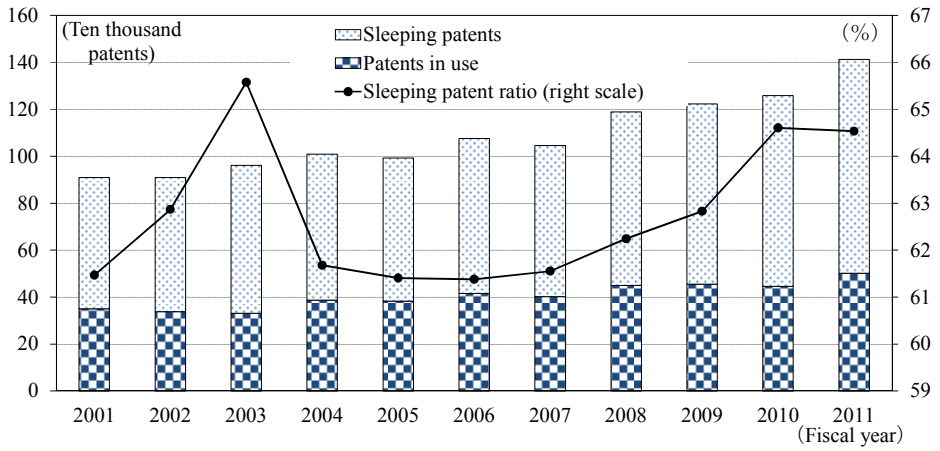


(Source) "FY2011 Status of Academia-Industry Cooperation at Universities" prepared by the MEXT
AUTM U.S. Licensing Activity Survey

(Source) "FY2013 Survey of Venture Capital Investment Trends" prepared by Survey Venture Enterprise Centre

In fact, in Japan, patents generated at universities are not used by venture enterprises. According to the estimates of Professor Watanabe Toshiya et al. of the Policy Alternative Research Center, University of Tokyo, out of the approximately 6,500 patents for which applications are filed in Japan per year, thirty-one are used by ventures. In the meantime, the number of patents for which universities file applications jointly with large enterprises is approximately 2,800, demonstrating that far fewer patents are used by ventures. In the United States, 12,000 patent applications are filed per year, but 1,800 are used by ventures. This means that, in Japan, the technologies that are the seeds of ventures are not being channeled towards the creation of industry to begin with. In Japan, academia-industry cooperation is often undertaken with large enterprises that provide large amounts of research funds, but, as shown in Fig. 9, this often results in sleeping patents. This is because, in some cases, innovative technological developments and business models are not consistent with the technologies or sales channels introduced by the large enterprises or would cause cannibalization with the products and services that are being sold.

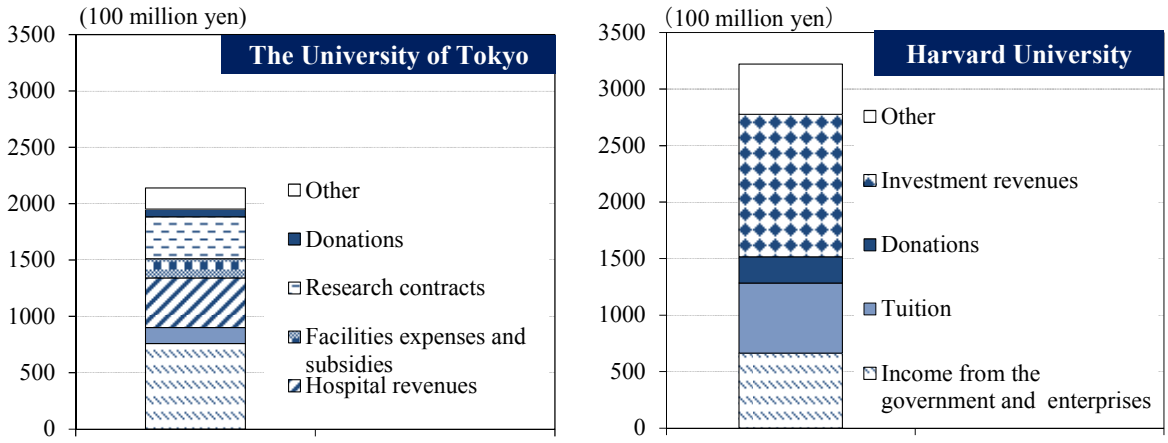
■ Fig. 9 Sleeping patents are on the increase



Source: Basic Survey of Japanese Business Structure and Activities prepared by METI

To put in place a structure under which universities supply patents to ventures, it is necessary for universities to establish their own financial base to enable then to pursue independent research and development without being over-reliant on joint research with large enterprises. Prominent private universities in the United States have established their own financial base through asset management, and surely it is necessary for Japan also to consider the privatization of universities and for universities to freely manage their own assets. To enable this, stronger management would be essential while the self-governance of universities would need to be respected. The successful development of university-originated ventures would also serve to underpin the financial base of universities, and, as is the case with prominent universities in the United States, revenues from investment would support university finances and ultimately facilitate the establishment of "self-governance"; in other words, it is likely that a positive growth cycle would be created .

■ Fig. 10 Harvard University generates revenues from investment



Source: Revenue structures of the top universities in Japan and the United States FY2012

Maintain position as a first-tier nation

◆ Also beneficial for Japan's social and cultural development

Even with a declining population, there is a way to accelerate growth, through a combination of working-style reforms to fully utilize human resources, including women and foreigners, and policies to open up Japan and invite people, expertise and investment from overseas. It is also possible to (1) lower the public burden through stabilization of fiscal and social security systems and (2) ensure Japan's presence on the international stage, by introducing a policy of population targets. In order to maintain its position as a first-tier nation, Japan must pursue these policies as part of a comprehensive program toward 2050.

To release the latent abilities of human resources and technological resources, Japan must implement a new phase of reforms, reviewing the employment practices built up during the era of

high growth with zero based thinking methodology. In order to strengthen support measures for the younger generation, it is also necessary to accept further tax increases and a temporary decline in the level of pensions. The reforms will take a long time. Deciding to raise the consumption tax rates in increments of 1% over the long term (for example, over a period of fifteen years starting in FY2016) may also be an effective way of achieving hardship now, pleasure later.

Some people in Japan take the view that it is fine for Japan not to remain a leading economic power, but if Japan, a country reliant on exports for many of its resources, is to maintain its present standard of living, then it needs to maintain its position as a first-tier nation. It must also not be forgotten that Japan's social and cultural wealth is, in some respects, supported by its economic strength. Looking back on Japan's history from the Asuka and Nara periods to the Meiji Restoration and postwar Japan it is clear that in the days when Japan adopted a policy of opening itself up to the rest of the world and attempted to become a first-tier nation, its social systems and culture also developed massively. The common theme running through all such periods is that Japan was not bound by the past but resolutely implemented a new phase of reforms in its various political and economic systems.

Notes:

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Footnotes

[i] Contributors include Kazumasa Iwata, JCER President, economists Sumio Saruyama, Tatsuo Kobayashi, Ryo Hasumi, Tetsuya Hattori, Shinji Takenaka, Takashi Onodera and Yuki Masujima, Professor Nariyasu Yamasawa of Atomi University, cooperative researcher Yoichi Tsuchiya, and research assistants Masato Takara and Yuki Sotozono.

[ii] Fig. 1 also showed the case where the birthrate is raised to 2.1. In this case, childrearing benefit and childcare subsidies equal to 2.7% of annual GDP would be required. On the other hand, the increase in the share of the foreign-born population would be limited. For further details, please refer to the in-depth report "Establishment of Population Targets" to be published shortly.

[iii] Please refer to Madoka Kitamatsu (2013) for details on the actual childrearing system in France.

[iv] The impact of migration on the balance of government revenue and expenditure has been reported to vary depending on the circumstances, for example, generally speaking, if the percentage of skilled human resources is high, tax revenues exceed expenses and the balance is positive, while in the case of unskilled workers, the balance is said to be negative (Vargas-Silva, 2013). Here, the net fiscal effect is simply assumed to be zero.

[v] Assuming that reforms continue to proceed at the gentle pace of the past 20 years, real GDP growth from 2010 to 2050 will be almost zero (JCER, 2013). This time, we assumed that the GDP per capita growth rate from 2040 to 2050 will continue thereafter and we multiplied this by the size of the population to calculate GDP in 2100.