Japan's Low Fertility and Policy Interventions[1]

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[Abstract]

After two decades of the golden age of family when fertility stayed around the replacement level, the second demographic transition started in the mid-1970s and the TFR in Japan has stayed far below replacement level for almost 40 years. The latest population projection suggests that there will be no significant improvement in fertility and that population decline and aging will be very severe. While the rise in consumer/producer ratio could be avoided with the expected rise in labor force participation, the rapid population aging still has negative impact on economy. Although fertility decline has larger impact on population aging, the effect of mortality decline is also significant especially in low fertility setting.

While nuptiality decline accounts for a large part of fertility decline, decline in marital fertility also contributed. Fertility decline in Japan can be understood not from reduced demand for children but from obstacles to achieve the demand. Such obstacles include rising cost of children, worsened labor market condition for young workers and low compatibility between work and family for women.

Japan turned to pronatal policy in the early 1990s. Policy measures include child allowance, childcare leave, work-life-balance campaign, improvement in childcare services, etc. The Democratic Party failed to keep its election promise in 2009 to expand child allowance, giving negative impact on people's trust on governmental policy.

Fertility Decline in Japan

Figure 1 shows the trend of the Total Fertility Rate (TFR) and the replacement level in Japan. The latter is the level of TFR that results in a stationary population in a long run. The postwar baby boom in Japan lasted only for three years in 1947-49 and the first demographic transition took place in the 1950s. The period between the late 1950s and early 1970s was the golden age of family in Japan. The rapid economic growth was based on the male breadwinner model, the pattern of universal marriage was sustained and the TFR stayed around the replacement level except for the *Hinoeuma*

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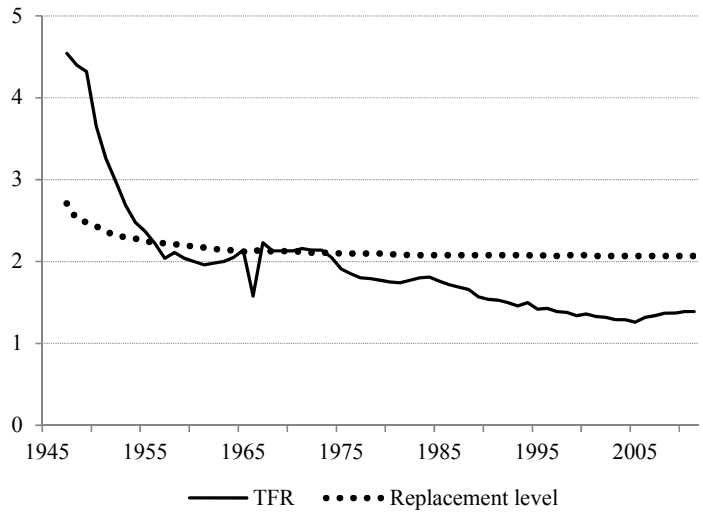
year of 1966 when parents avoided childbearing for superstition.

The TFR started declining again in mid 1970s into the below-replacement level, marking the emergence of second demographic transition in Japan. The TFR of 1.57 in 1989 was shocking because it was believed that 1.58 in 1966 was so special that the TFR would not stay below this level. However, fertility continued to decline and the TFR crossed line of 1.5 in 1993 and 1.3 in 2003. Although lowest-low fertility defined as having the TFR of 1.3 or less (Kohler, et al., 2002) lasted only for three years in 2003~2005, 1.39 in 2011 is far blow from the replacement level. The Net Reproduction Rate (NRR) of 0.67 in 2011 implies that one third of population will disappear in each generation and the population will be halved in 54 years.

Figure 1. Fertility Decline in Japan



If the presently low TFR were a result of the “tempo distortion” (Bongaarts and Feeney, 1998), the level would be improved significantly and the future population growth rate would be higher than the intrinsic natural growth rate of -1.29% in 2011 (Beppu and Ishikawa, 2012). However, the latest population projection for Japan (NIPSSR, 2012b) assumed a relatively pessimistic scenario that the TFR will converge to 1.35 in the medium variant. Although there was an improvement in TFR from 1.26 to 1.39 in 2005~2010, such change was assumed to be the rebound from a prolonged depression in fertility in 2000~2005 (Kaneko, 2010a). As the result, the medium fertility/mortality variant suggests that the population growth rate in Japan will be -0.74% in 2030 and -1.19% in 2060.

The assumption that the TFR in 2060 converges to 1.35 may seem to be too pessimistic if compared with the medium variant of UNDP(2010) assuming the TFR in Japan in 2060 will be 1.90. However, Eastern Asian demographers cannot be as

optimistic as the UNDP. Table 1 compares the assumed TFR in various projections. The medium variant of the NIPSSR falls between official projections in the Republic of Korea (simply "Korea," hence force) and in the Republic of China (simply "Taiwan," hence force). In addition, the range of assumption in the NIPSSR projection is narrower than other projections, showing more confidence in the future trend in fertility.

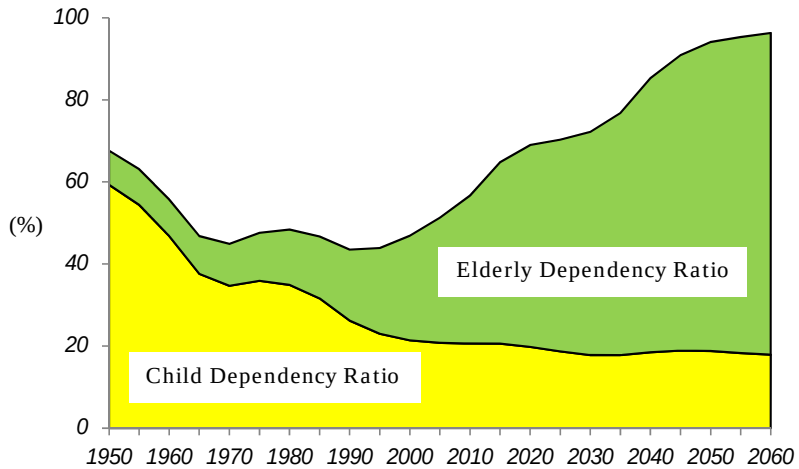
Table 1. Assumed TFR for 2060

Country	Projection	Low	Medium	High	Range
Japan	NIPSSR	1.12	1.35	1.60	0.48
	UNPD	1.40	1.90	2.40	1.00
Korea	Statistics Korea	1.01	1.42	1.79	0.78
	UNPD	1.40	1.90	2.40	1.00
Taiwan	Council for Economic Planning and Development	1.05	1.30	1.60	0.55
UN	Population Division	1.25	1.75	2.25	1.00

National Institute of Population and Social Security Research (2012b),
Statistics Korea (2011),
Council for Economic Planning and Development (2012),
United Nations Population Division (2010)

Population Aging

Figure 2. Dependency Ratios in Japan



Census, NIPSSR (2012b)

The assumption of no significant improvement in fertility results in a severe population decline and aging. Figure 2 shows the child dependency ratio, defined as the ratio of the population under 15 to that between 15 and 64, and the elderly dependency ratio, defined as the ratio of the population over 65 to that between 15 and 64. The sum

of these two ratios is the total dependency ratio. The decline in total dependency ratio due to fertility decline is called “demographic gift” or “demographic bonus” (Mason and Lee, 2001:9). While Japan enjoyed this gift between 1970 and 1990, the rapid aging of the population started elevating the total dependency ratio after 1990. According to NIPSSR (2012b), the elderly dependency ratio of 36.1% in 2010 will swiftly reach 54.4% in 2030 and 78.4% in 2060. The total dependency ratio of 2060 implies that there will be 96 net consumers for 100 net producers, compared with 57 net consumers today.

While the total dependency ratio is so easily obtained and compared between countries, the assumption that all the working age population aged 15~64 are net producers and all the children and elderly population are net consumers is too simple. An ideal solution would be the “support ratio” used in the National Transfer Account (Lee 2007:17; Mason and Lee 2012:13). However, per capita income and consumption by age are difficult to obtain and project. Instead, it is attempted here to calculate the ratio of non-laborers to laborers using census and existing projection.

Figure 3 shows the labor force participation rates in 2000 and 2010 censuses and projection for 2030 conducted by the Employment Security Bureau (2007). The projection expects rises in labor force participation due to reduction in income difference by age and sex, improvement in childcare service and delay in retirement. While the labor force participation rate of men aged 65~69 is projected to increase from 54.1% in 2010 to 63.9% in 2030, predicted improvement in female labor force participation in 2010~2030 is relatively mild if compared with the change in 2000~2010.

Figure 3a. Labor Force Participation Rate: Male

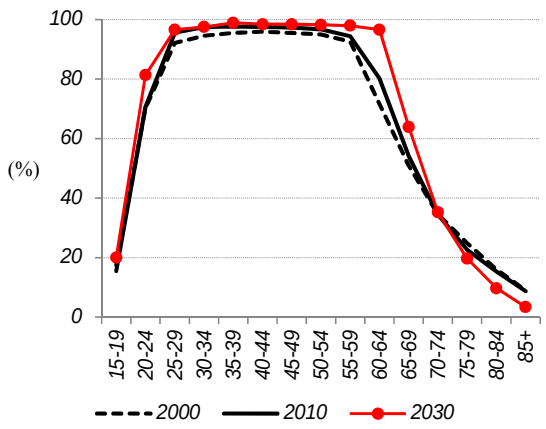


Figure 3b. Labor Force Participation Rate: Female

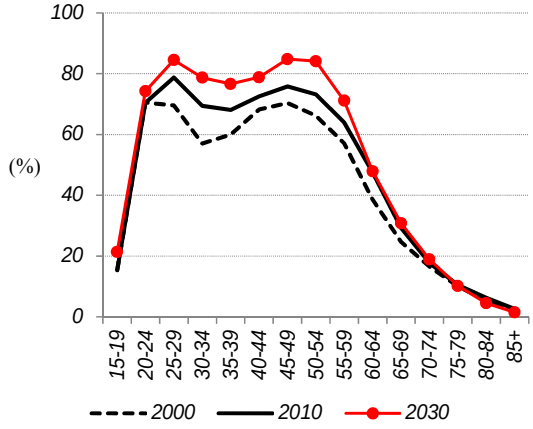
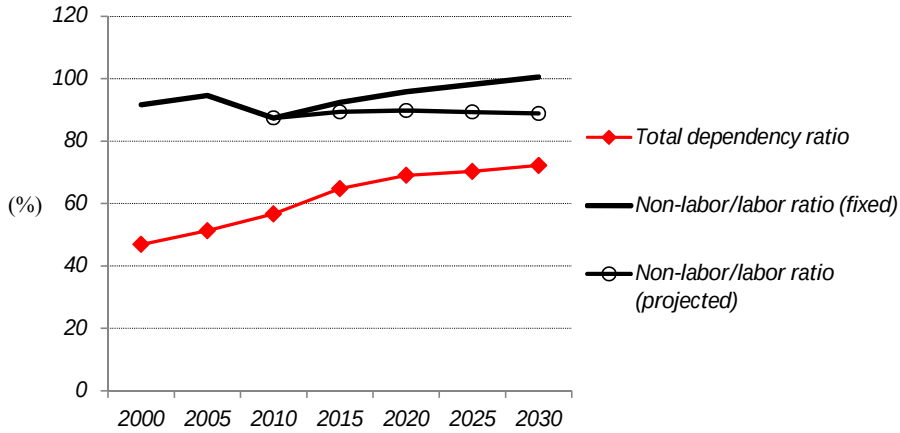


Figure 4 compares non-labor/labor ratios with constant age-sex labor force participation rate given in the 2010 census and that with projected labor force

participation rates, in addition to the total dependency ratio. For the non-labor/labor ratio with changing labor force participation, it was assumed that the rate changes linearly in 2010~2030. If labor force participation rates are fixed at the level in the 2010 census, the non-labor/labor ratio rises from 87.4% in 2010 to 100.5% in 2030. However, the projected improvement in labor force participation may compensate the demographic deficit and the ratio may be held constant until 2030.

Figure 4. Dependency Ratio and Non-Labor/Labor Ratios



Thus, it could be possible to cope with population aging and to prevent the practical dependency ratio from rising rapidly. However, improvements in male and female labor force participation should contribute to economic growth if the population aging were milder. Thus, the predicted rapid population aging still has negative impact on Japanese economy. In addition, the number of young and middle aged workers will decline more rapidly than old workers. Such a fall in the labor supply of skilled young workers is very problematic, under rapid technological development and globalization (McDonald 2005:1).

It is expected that the aging of the population will eventually boost economic growth because elderly people have more assets than younger generations, and this suggests that capital intensification will occur. However, such a "second dividend" effect would be small in Japan, because only a small portion of consumption by the Japanese elderly comes from asset-based reallocations (Lee 2007:31).

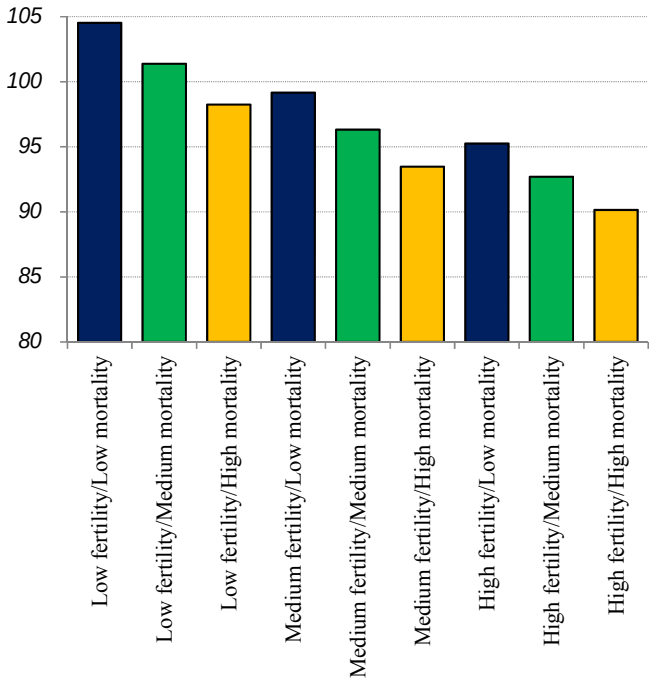
Causes of Demographic Changes

Impacts of fertility and mortality on population aging

Figure 5 compares the total dependency ratio in 2060 in nine different projections conducted by NIPSSR (2012b). The effect of fertility is stronger than mortality, as the

stable population theory expects (Keyfitz and Caswell 2005, chp. 5; Preston, et al. 2001, chp. 7). For example, if we choose the medium fertility variant, the difference between low mortality variant (99.2%) and high mortality variants (93.5%) is 5.7 points. If we choose the medium mortality variant, however, the difference between low fertility variant (101.4%) and high fertility variant (92.7%) is as large as 8.7 points.

Figure 5. Total Dependency Ratio in 2060 by Assumption



In the case of Japan, the effect of mortality change is not negligible. In a low mortality population as in Japan, there is little room for further mortality decline for younger ages and assumed mortality decline concentrates in old ages. Actually, the projected elderly population aged 65 and over in 2060 is 3,597 thousands in the low mortality variant, which is 8.0% larger than 3,332 thousands in the high mortality assumption. In addition, the population pyramid of a low fertility country is pot-shaped. In such a case, the difference in old age population is emphasized and easily recognized.

The life expectancy at birth of male and female in 2010 was 79.64 and 86.39, respectively. The medium mortality variant assumes that the life expectancy in 2060 will be 84.19 and 90.93 for male and female, respectively. Causes of mortality decline can be classified into medical factors including development in prevention and treatment, socio-economic and institutional factors including health care facilities and

insurance system, and life style factors including diet, drinking, smoking and exercise (Kaneko, 2010b). For longer life expectancy in Japan than other advanced countries, Horiuchi (2010) pointed out Japanese diet characterized with low calorie and fat, cleanliness of Japanese society, genetic property with less ApoE4, and strong social cohesion of a homogeneous society.

Proximate determinants of fertility

Fertility decline and stagnation at far below replacement level draws more concern. As Lesthaeghe (2010) mentioned, only one element of the second demographic transition that cannot be found in Eastern Asia is the increase in extramarital births. The proportion of extramarital birth in Japan was 2.15% in 2010, with very little change from 1.07% in 1990 and 1.63% in 2000. Thus, a large part of fertility decline could be attributed to nuptiality decline. Although some Japanese demographers asserted that nuptiality decline explains whole part of fertility decline using AMFRs (Age-specific Marital Fertility Rates), the method is erroneous (Hirosima, 2001; Kaneko, 2004; Suzuki 2009). More sophisticated demographic analyses have shown that between 35% and 75% of fertility decline in Japan can be explained by nuptiality decline (Hirosima, 1999; 2000; Iwasawa, 2002; Ogawa, 2003; Kaneko, 2004; Suzuki, 2005).

Since marriage does not explain fertility decline in its entirety, there should be other proximate determinants (Bongaarts, 1978) that caused a significant fall in marital fertility. However, neither contraception nor induced abortion is responsible for it in Japan. According to the family planning survey by the Mainichi Newspapers (2005), the proportion of currently married women practicing contraception was 52% in 2004 and was lower than in the early 1990s. The abortion/birth ratio dropped from 37.4% in 1990 to 28.7% in 2000, then to 19.9% in 2010 (NIPSSR 2012a:68).

As expected, the frequency of miscarriages has also been declining. There were 26,560 still births in 2010 in Japan and the ratio to live births was 2.5%. It was significantly lower than the 4.4% in 1990 and 3.2% in 2000 (ibid:67). It is said that many mothers in Japan stop breastfeeding by 1.5 years after giving birth. Thus, neither intrauterine mortality nor postpartum amenorrhea seems to have contributed to the recent fertility decline.

The remaining proximate determinants are frequency of intercourse and sterility. There is no time series data on coital frequency or infecundity of married couples in Japan. It might be possible to assert that sexless couples are increasing due to the long working hours or strengthened mother-child ties. It might also be possible to hypothesize an increase in infecundity due to the rising age at marriage, environmental hormones, and sexually transmitted diseases (Semba, 2002). However, it is difficult to

quantitatively evaluate such hypotheses, due to the lack of necessary data.

Demands for children

An important question on the recent fertility decline is whether it is a result of voluntary choice. The Low Fertility Trap Hypothesis (Lutz et al., 2006) suggested a possibility of positive feedback between attitude and behavior. The mechanism has already started working in German speaking countries where the ideal number of children is extremely low. However, very low fertility in Japan is not the result of very low demand for children. The demand for children in Japan has been declining slowly but was still as high as 2.42 in 2010 (NIPSSR 2012c:28). Thus, the recent fertility decline in both countries should be explained not by demand itself but by obstacles to fulfilling the demand.

Direct cost of children

In the world of post-industrialization, globalization and rapid technological development, there is a growing demand for human capital investment. Thus, parents are more interested in quality for their children and educational costs have become higher (Becker, 1991; Willis, 1994). The rising cost of children, including public and private educational costs, is thought to be the main reason of the recent low fertility rate in Eastern Asia.

Table 2. Percentage of private expenditure on education (2009)

Rank	Country	%	Rank	Country	%
1	Chile	41.1	16	Poland	13.3
2	Korea	40.0	17	Spain	12.9
3	Japan	31.9	18	Czech Republic	12.0
4	United Kingdom	31.1	19	Slovenia	11.5
5	United States	28.0	20	France	9.8
6	Australia	26.8	21	Italy	9.3
7	Canada	21.4	22	Iceland	9.2
8	Mexico	21.2	23	Austria	8.6
9	Israel	20.8	24	Portugal	6.5
10	New Zealand	17.4	25	Estonia	5.8
11	Netherlands	16.3	26	Ireland	5.8
12	Slovak Republic	16.1	27	Belgium	5.7
13	Russian Federation	15.2	28	Denmark	4.2
14	Germany	15.0	29	Sweden	2.6
15	Argentina	14.3	30	Finland	2.4

OECD, Education at a Glance 2012, Table B3.1 (p. 257)

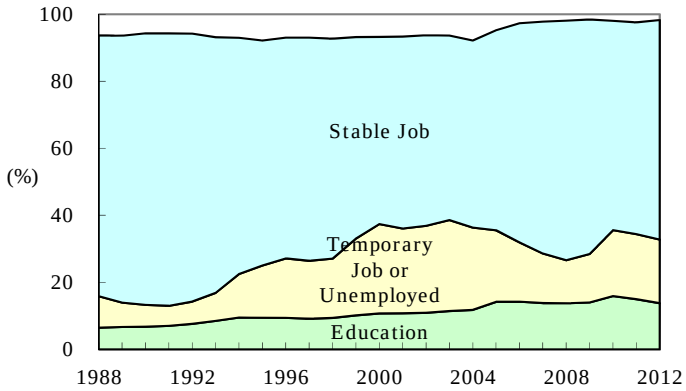
Table 2 shows the proportion of educational expenditure paid by private sources. Governmental support tend to be low in Latin America, Eastern Asia and English

speaking countries. The percentage of Japanese parents spend (31.9%) is only after Chile (41.1%) and Korea (40.0%) in OECD countries.

Economic recession and labor market condition

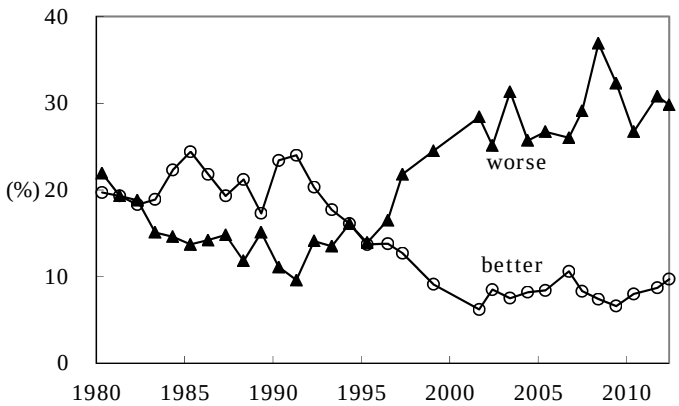
Young people who grow up in periods of rapid economic growth tend to have high aspirations for their future lives. When the economy slows down, however, labor market conditions for young workers become tight. Those who conceive difficulty in achieving their expected standard of living will hesitate when it comes to marriage and childbearing (Easterlin, 1978; Yamada, 1999; Lutz, et al., 2006).

Figure 6. States ofCollege Graduates



Ministry of Education, School Basic Surveys.

Figure 7. Expectation on Future Life



Cabinet Office, Opinion Survey on People's Lives.

In the case of Japan, the economy was bad throughout the 1990s. The unemployment rate rose sharply from 2% in 1990 to 5% in 2003. The tight labor market conditions seriously discouraged youth career achievements. Figure 6 shows the labor

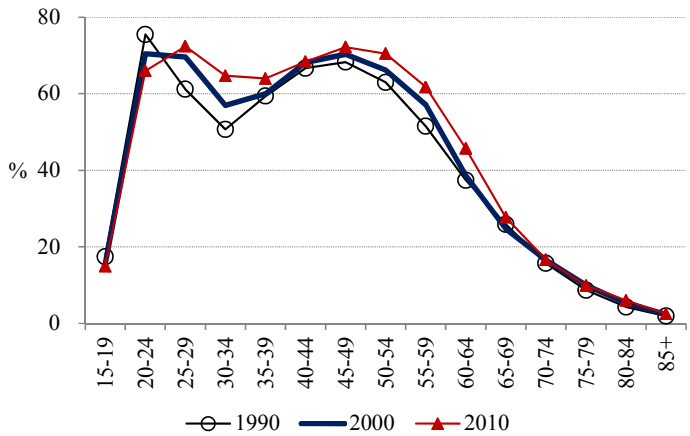
force status of college graduates immediately after graduation. The proportion who had obtained a stable job decreased from 77.8% in 1988 to 55.0% in 2003, and then recovered to 71.5% in 2008. The proportion of those who had obtained a temporary job or who were unemployed increased from 9.4% to 27.1% between 1988 and 2003. Although the labor market condition for new graduates was temporarily improved in 2006~2008, was worsened again due to the global financial crisis in 2008.

The economic recession is thought to have affected people not only through employment status itself, but also through expected future income. Figure 7 shows the result of an opinion survey conducted by the Cabinet Office regarding expectations on one's future life. In the late 1980s and the early 1990s, there were more respondents who answered "(my life) will get better" than those who answered "will get worse." During the 1990s, however, the answer "worse" continuously increased and exceeded "better" around 1995. In June 2012, the pessimistic attitude surpassed the optimistic one by 20 percentage points. It is thought that such uncertainty about the future is one of the major sources of lowest-low fertility in recent Japan.

Female labor force participation and compatibility between work and family

According to Becker (1991:50-354), the main cause of family changes since the latter half of the 20th century has been the rising economic power of women. The expanding occupational opportunities for women increased the time spent on market activities and raised the opportunity cost of children. The declining return from the gender-based division of labor reduced the merit of marriage and promoted the rise in the divorce rate. These changes resulted in the increase in female-headed households, cohabitation, and extramarital births.

Figure 8. Female Labor Force Participation Rates in Censuses of Japan



The Japanese way of management until the 1980s was characterized by the lifetime employment of male workers and the early retirement of female workers. Although the male breadwinner model was considerably eroded today, many women still quit jobs because of the incompatibility between work and childbearing. This situation is expressed in the so-called M-shaped curve of female labor force participation rates shown in Figure 8. Many analyses using micro data also shows that mother's work still has the negative effect on fertility (Asami et al., 2000; Oi, 2004; Oyama, 2004; Sasai, 1998; Shichijo and Nishimoto, 2003; Tsuya, 1999; Fukuda, 2004; Fujino 2002; Yashiro, 2000; Yamagami, 1999; Yamaguchi, 2005).

Pronatal Policy Interventions in Japan

Table 3 summarizes the development of pronatal policy measures in Japan. The Japanese government was surprised by the historically low TFR of 1.57 in 1989 and started an inter-ministry committee to create measures to cope with the declining fertility in 1990. The amount of the child allowance was raised in 1991, while the period of payment was shortened to keep to the budget. The Childcare Leave Law (formally "Law Concerning the Welfare of Workers Who Take Care of Children or Other Family Members Including Child Care and Family Care Leave") was established in May 1991 and enforced in April 1992.

Table 3. Pronatal Policy Interventions in Japan

Year	Policy Measures
1991	Government's Guideline "Toward Satisfactory Conditions for Healthy Childbearing"
	Amendments to Child Allowance Law
	Childcare Leave Law
1994	Angel Plan (1994~1999)
	Amendments to Childcare Leave Law
1997	Amendments to Child Welfare Law
1999	New Angel Plan (2000~2004)
2000	Amendments to Childcare Leave Law
	Amendments to Child Allowance Law
2002	Ministry of Health "Measures for Decreasing Children Plus One"
2003	Law for Measures to Support the Development of the Next Generation
	Law for Measures to Cope with Decreasing Children Society
	Amendment to Child Allowance Law
2004	Support Plan for Parents and Children (2005~2009)
2006	New Policy to Cope with Low Fertility
2007	Important Strategy to Support Children and the Family
2010	Visions for Children and Childrearing (2010~2014)
2012	Three New Laws for Childcare

In December 1994, the government publicized the Angel Plan for the period between 1994 and 1999. The program emphasized the compatibility between work and childcare and public support for childrearing. As a part of this program, amendments to the Childcare Leave Law were made to support income and exempt social security premium payment in 1994. In 1997, a major reformation was made to the Child Welfare Law to provide working mothers with satisfactory daycare services.

In December 1999, the government released the New Angel Plan for the period between 1999 and 2004. This document asserted the need to improve gender equity and working conditions.In May 2000, an amendment to the Childcare Leave Law determined that 40% of wages should be paid during the leave. The child allowance, which was previously available only for children less than three years old, was expanded to also cover preschoolers. The cabinet adopted the "Zero Waiting List for Daycare Program" as a political goal in July 2001. As a result, the daycare center enrollment rate of children under age two increased from 15.6% in 2001 to 20.3% in 2007. At least a part of the difference from Northern European countries, where the rate is higher than 40%, should be attributed to the cultural pattern that emphasizes the mother's supreme role of childrearing.

The Next Generation Law, enacted in July 2003, required local governments and large companies to submit their own programs to foster new generations. At the same time, the Law for Measures to Cope with Decreasing Children Society ordered the Cabinet Office to prepare new measures to prevent further rapid decline in fertility. An expansion of the child allowance, to cover children in the third grade of primary school, was enforced in April 2004.

In December 2004, the government declared the Support Plan for Parents and Children (New-New Angel Plan) for the period between 2004 and 2009. The document emphasized the role of local governments and companies in providing childcare supports and improving gender equity. In addition, the document pointed out the importance of economic independence of the youth. From fiscal year 2006, the child allowance was expanded again to cover children in the sixth grade of elementary school. In addition, the Support Plan for Mothers' Reentry to Labor Market was implemented. The plan includes such measures as starting a course at vocational schools for mothers reentering the work force, helping mothers who attempt to start businesses, and running "Mothers' Hello Works" for job-seeking mothers.

In June, 2006, the government announced the New Policy to Cope with Low Fertility. The monthly cash benefit of the child allowance was raised from 5,000 yen to 10,000 until the third birthday of a child. However, Japan's child allowance was

means-tested until 2010, and approximately 15% of children were eliminated in 2003 because of their parents' high income (Suzuki 2006:10). The cash benefit during childcare leave was raised from 40% to 50% of wages. According to the Basic Survey of Employment Management of Women in 2005, 72.3% of eligible female workers actually took the leave. The ratio of the number of leave-takers to annual births in 2005 was 11.1% (Suzuki 2007:21).

The Important Strategy to Support Children and the Family in 2007 focused on the issue of compatibility between work and the family and aimed at the materialization of the "work-life balance." The agreed Work-Life Balance Charter proposed to raise the employment rate and productivity while reducing the number of temporary workers, to shorten working hours while seeking better family life, and to improve flexibility and gender equity in workplaces.

These measures were mainly introduced by the coalition government of Liberal Democratic Party (LDP) and New Komei Party (NKP) that took the power between 1999 and 2009. In 2009, however, the Democratic Party of Japan (DPJ) won the election and formed the coalition with People's New Party and Social Democratic Party, although the latter withdrew in May, 2010.

Table 4. Child Allowance in Japan

Age	Birth Order	2007.4~2010.3	2010.4～2011.9	2011.10～2012.3	2012.4～
0~2	All	10,000 yen	13,000 yen	15,000 yen	15,000 yen
3~12	1st and 2nd	5,000 yen	13,000 yen	10,000 yen	10,000 yen
3~12	3rd +	10,000 yen	13,000 yen	15,000 yen	15,000 yen
13~15	All	0 yen	13,000 yen	10,000 yen	10,000 yen
Means text		Yes	No	No	Yes

In January 2010, the government publicized a new action program called Visions for Children and Childrearing. It included election promises of the Democratic Party such as expansion of child allowance program. The party promised to raise the monthly benefit from 10,000 yen to 26,000 yen and to abandon the means test. It turned out that, however, such an increase is impossible due to the budget constraint. The new act passed in March 2010 decided that 13,000 yen will be paid without means test until a child graduates junior high school (Table 4). The failure to keep promise gave a serious damage to the Democratic Party. The government decided to give up the Democratic Party's formula and to return to the former formula with means test from the fiscal year of 2012. During the president election in Korea, Park Geun-hye criticized Moon Jae-in's plan to introduce child allowance program referring to this failure in Japan (News1, 2012-12-16).

Table 5. Public Expenditure of Childcare Services (2008)

Country	% of GDP	Country	% of GDP
Denmark	0.85	Iceland	0.18
Finland	0.70	Italy	0.15
Norway	0.67	Czech Republic	0.12
Sweden	0.64	Canada	0.12
United Kingdom	0.44	Hungary	0.10
France	0.37	New Zealand	0.09
Luxembourg	0.36	Israel	0.09
Netherlands	0.34	Mexico	0.09
Belgium	0.24	Slovak Republic	0.08
Korea	0.24	United States	0.07
Japan	0.24	Germany	0.06
Australia	0.19		

OECD, Economic Policy Reforms 2012.

In August 2012, the Act for Total Reform of Tax and Social Security passed at the Upper House. According to the act, the consumption tax rate will be raised from current 5% to 8% in April 2014 and to 10% in October 2015. Three parties (DPJ, LDP and NKP) agreed to spend 2.7 trillion yen from increased revenue into family and social security areas. While 2 trillion yen will be spent for the elderly people, remaining 0.7 trillion yen will be spent for children. Since the governmental spending for children in 2012 is estimated to be 4.8 trillion yen (NIPSSR 2013:127), 0.7 trillion yen implies an increase by 14.6%.

According to Table 5, Japan spent only 0.24% of GDP on childcare services in 2008. Even if the figure were increased by 14.6%, the new figure of 0.28% would not considerably change the rank of Japan.

Conclusion

The effectiveness of pronatal policy has not been confirmed among policy makers. Korean president Park Geun-hye asserted that child allowance has no effect on a TV debate against Moon Jae-in on December 16th, 2012. Monetary incentive is less effective than anti-natal policy because pronatal policy is taken in richer countries. It is more difficult to induce childbearing in advanced countries than to induce sterilization in developing countries with monetary benefit.

Relatively high fertility in the United States without governmental effort to raise fertility is another source of skepticism. However, it is said that fertility is sustained by low quality childcare service provided by illegal immigrants. Parents in other countries including Japan cannot give up high quality services guaranteed by the government

(McDonald, 2002). Since Japan cannot switch to the U.S. style, there is no choice other than to improve quantity and quality of public support to raise fertility as in welfare states in Northern/Western Europe. It is important that expected parents can believe that sufficient support is given if they have a child. In this sense, the failure of DPJ in child allowance program was harmful for trust on governmental family policies.

Another remedy to reduce the impact of population decline and aging is accepting immigrants. In 2008, a group of LDP members proposed to accept 10 million immigrants in coming 50 years. However, there was no significant development in the DPJ government. Japan has accepted 1,562 candidates for nurse and care workers from Indonesia, Vietnam and Philippines between 2008 and 2012. Candidates for nurse need to pass the national qualification within three years and candidates for care workers within four years. Sakanaka (2011) criticized this program as superficial acceptance and practical exclusion. It is ambiguous if the interest of business side to accept foreign workers can resolve the anxiety of labor side.

References

Becker, Gary S. 1991. *A Treatise on the Family, Enlarged Edition*, Harvard University Press, Cambridge, Massachusetts.

Bongaarts, John 1978. "A Framework for Analyzing the Proximate Determinants of Fertility," *Population and Development Review* 4(1):105-132.

Bongaarts, John and Griffith Feeney (1998) "On the Quantum and Tempo of Fertility," Population and Development Review 24(2):271-291.

Easterlin, R. A. 1978. "What Will 1984 Be Like? Socioeconomic Implications of Recent Twists in Age Structure," *Demography* 15(4):397-421.

Kohler, Hans-Peter, Francesco C. Billari and José Antonio Ortega 2002. "The Emergence of Lowest-Low Fertility in Europe during the 1990s," *Population and Development Review* 28(4):641-681.

Lee, Ronald D. 200700 *Global Population Aging and its Economic Consequences*, The AEI Press, Washington DC.

Lesthaeghe, Ron 2010. "The Unfolding Story of the Second Demographic Transition," *Population and Development Review* 36(2):211-251.

Lutz, W., V. Skirbekk, and M. R. Testa 2006. "The Low Fertility Trap Hypothesis: Forces that May Lead to Further Postponement and Fewer Births in Europe," *Vienna Yearbook of Population Research* 2006:115-151.

Mason, Andrew and Ronald Lee 2011. "Population Aging and the Generational Economy: Key Findings," Pp. 3-31 in Ronald Lee and Andrew Mason (eds.)

Population Aging and the Generational Economy, Edward Elgar, Cheltenham, UK.
McDonald, Peter 2002. “Sustaining Fertility through Public Policy: the Range of Options,” *Population (English Edition)* 57(3):417-446.
McDonald, Peter 2005. “Fertility and the State: the efficacy of policy,” XXV International Population Conference.
Ogawa, Naohiro 2003. “Japan's Changing Fertility Mechanisms and its Policy Response,” *Journal of Population Research* 20(1):89-106.
Suzuki, Toru 2005. “Why is Fertility in Korea Lower than in Japan?” *Journal of Population Problems* 61(2):23-39.
Suzuki, Toru 2006. "Lowest-low fertility and governmental actions in Japan," The PIE International Conference on Declining Fertility in East and Southeast Asian Countries, Hitotsubashi Collaboration Center, Tokyo.
Suzuki, Toru 2007. “Nuptiality and fertility declines in Japan,” International Seminar on Low Fertility and Policy Responses in Selected Asian Countries, Korea Institute for Health and Social Affairs.
Suzuki, Toru 2009. "Fertility Decline and Governmental Interventions in Eastern Asian Advanced Countries,” *The Japanese Journal of Population* 7(1):47-56.
United Nations Population Division (2010) *World Population Prospects, 2010 Revision*.
Willis, Robert J. 1994. “Economic Analysis of Fertility: Micro Foundations and Aggregate Implications,” chp.6 in Kiessling, K. L. and H. Landberg (eds.), *Population, Economic Development, and the Environment*.

(in Japanese)
浅見泰司・石坂公一・大江守之・小山泰代・瀬川祥子・松本真澄, 2000**「少子化現象と住宅事情」『人口問題研究』第** 56 **巻第** 1 **号**, pp. 8-37.
岩澤美帆 (Iwasawa 2002)**「近年の** TFR **変動における結婚行動および夫婦の出生行動の変化の寄与について」『人口問題研究』第** 58 **巻第** 3 **号**, pp. 15-44.
大井方子 (Oi 2004)**「バブル崩壊前後の出産・子育ての世代間差異」樋口美雄・太田清・家計経済研究所編『女性達の平成不況：デフレで働き方・暮らしはどう変わったか』日本経済新聞社**, pp. 117-151.
大山昌子 (Oyama 2004)**「子どもの養育・教育費用と出生率低下」『人口学研究』第** 35 **号**, pp. 45-57.
金子隆一 (Kaneko 2004)**「出生数変動の人口学的メカニズム」大淵寛・高橋重郷編『少子化の人口学』原書房**, pp. 15-36.
金子隆一 (Kaneko 2010a)**「わが国近年の出生率反転の要因について－出生率推計モデルを用いた期間効果分析－」『人口問題研究』第** 66 **巻第** 2 **号**, pp. 1-25.
金子隆一 (Kaneko 2010b)**「長寿革命のもたらす社会－その歴史的展開と課題－」『人口問題**

研究』第 66 巻第 3 号, pp. 11-31.

厚生労働省職業安定局 (Employment Security Bureau, Ministry of Health, Labour and Welfare 2007)『すべての人々が能力を発揮し、安心して働き、安定した生活ができる社会の実現～本格的な人口減少への対応～』
http://www.mhlw.go.jp/houdou/2007/12/h1225-3.html

国立社会保障・人口問題研究所 (National Institute of Population and Social Security Research 2012a)『人口統計資料集 2012』人口問題研究資料第 325 号.

国立社会保障・人口問題研究所 (National Institute of Population and Social Security Research 2012b)『日本の将来推計人口—平成 23（2011）～72(2060)年—附：参考推計　平成 73（2061）～122（2110）年　平成 24 年 1 月推計』人口問題研究資料第 326 号.

国立社会保障・人口問題研究所 (National Institute of Population and Social Security Research 2012c)『平成 22 年第 14 回出生動向基本調査第Ⅰ報告書：わが国夫婦の結婚家庭と出生力』調査研究報告資料第 29 号.

国立社会保障・人口問題研究所 (National Institute of Population and Social Security Research 2013)『社会保障統計年報　平成 25 年版』社会保障研究資料第 13 号.

坂中英徳 (Sakanaka, 2011)『日本型移民国家への道』東信堂.

佐々井司 (Sasai 1998)「近年の夫婦出生力変動とその規定要因」『人口問題研究』第 54 巻第 4 号, pp. 3-18.

七條達弘・西本真弓 (Shichijo and Nishimoto 2003)「若い世代の夫婦の子供数に影響を及ぼす要因」『理論と方法』第 18 巻第 2 号, pp. 229-236.

仙波由加里 (Semba 2002) 「不妊と生殖補助技術の現状と課題」『人口学研究』第 31 号, pp. 37-46.

津谷典子 (Tsuya 1999) 「出生率低下と子育て支援政策」『季刊社会保障研究』第 34 巻第 4 号, pp. 348-360.

廣嶋清志 (Hirosima 1999) 「結婚と出生の社会人口学」目黒依子・渡辺秀樹編『講座社会学 2 家族』pp. 21-57.

廣嶋清志 (Hirosima 2000) 「近年の合計出生率低下の要因分解：夫婦出生率は寄与していないか？」『人口学研究』第 26 号, pp. 1-20.

廣嶋清志 (Hirosima 2001)「出生率低下をどのようにとらえるか? —年齢別有配偶出生率の問題性—」『理論と方法』第 16 巻第 2 号, pp. 163-183.

福田亘孝 (Fukuda 2004)「出生行動の特徴と決定要因－学歴・ジェンダー・価値意識－」渡辺秀樹・稲葉昭英・嶋崎尚子編『現代家族の構造と変容：全国家族調査[NFRJ98]による計量分析』東京大学出版会, pp. 77-97.

藤野敦子 (Fujino 2002)「家計における出生行動と妻の就業行動－夫の家事育児参加と妻の価値観の影響－」『人口学研究』第 31 号, pp. 19-35.

別府志海・石川晃 (Beppu and Ishikawa 2012)「全国人口の再生産に関する主要指標：2011 年」『人口問題研究』第 68 巻第 4 号, pp. 22-38.

堀内四郎 (Horiuchi 2010)「**日本人の寿命伸長：要因と展望**」『**人口問題研究**』**第** 66 **巻第** 3 **号**, pp. 40-49.
山上俊彦 (Yamagami 1999)「**出産・育児と女子就業との両立可能性について**」『**季刊社会保障研究**』**第** 35 **巻第** 1 **号**, pp. 52-64.
山口一男 (Yamaguch, 2005)「**少子化の決定要因について：夫の役割，職場の役割，政府の役割，社会の役割**」『**季刊家計経済研究**』**第** 66 **号**, pp. 57-67.
山田昌弘 (Yamada 1999)『**パラサイト・シングルの時代**』**ちくま新書**.

(in Korean)
통계청 (Statistics Korea 2011)『장래인구추계: 2010 년~2060 년』2011.12.

(in Chinese)
行政院經濟建設委員會 (Council of Economic Planning and Development 2010)『中華民國 2012 年至 2060 年人口推計』中華民國 101 年 7 月 23 日.

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일본의 저출산율과 정책적 대응

스즈키 도루 (국립사회보장 인구문제연구소)

일본의 합계출산율은 20년 정도 치환수준부근에 있었다가 1970년대중반부터 저하를 시작했다 .그 후 40 년 가까이에 걸쳐 치환수준을 크게 밑도는 합계출산율이 계속되고 있다 . 최신의 장래인구추계는 합계출산율이 현재의 낮은 수준에 머무른다고 가정하고 있어 심각한 인구감소와 고령화가 예상된다 . 노동력참가율의 상승에 의해 소비자 /생산자 비율의 상승은 회피할 수 있지만 급속한 인구고령화가 일본경제에 주는 타격은 클 것이다 . 인구고령화의 원인으로서는 출산율 저하의 영향이 더 크지만 출생율이 낮을 경우는 사망율의 영향도 무시할 수 없다 .

출산율저하의 원인으로서는 결혼율 저하의 영향이 크지만 결혼출생율의 저하도 영향을 주고 있다 . 일본의 출생율저하는 아이에 대한 수요가 저하했기 때문이 아니고 수요 실현을 막는 장해가 크기 때문이다 . 그런 장해에는 아이의 직접 비용 상승 , 젊은이 노동시장의 악화 , 일과 가정의 양립가능성이 낮은 것등이 있다 .

일본은 1990 년대 초두에 출생 촉진책에 전환했다 . 채용된 수단은 아동수당 , 육아휴업 , 워크 -라이프 -밸런스 캠페인 , 육아 서비스 개선등이다 . 2009 년의 정권교대시에 민주당은 아동수당 확충이라는 선거공약을 지킬 수 없고 정책에 대한 국민의 신뢰를 훼손했다 .