

Low Fertility and Policy Responses in Korea

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I. Trends in Fertility

During the 1950s, baby boom-fueled explosive population growth had been eating into the poor basis of economic growth, working as a major cause of the vicious cycle of poverty. Therefore, the Korean government adopted the anti-natal policy and initiated a strong family planning program in the early 1960s when Korea's economic development began to step up. As the family planning program began reaping its benefits and socio-economic changes came into being, including the increase in the standard of livings in the wake of rapid economic growth and better and wider education, the traditional value on high fertility began to wane.

As a result, the total fertility rate (TFR) dropped sharply from 6.00 in 1960. The TFR already equal to the population replacement level in 1983, Thereafter, an phenomenon of low fertility under TFR of 2.1 has lasted in Korea. From the mid-1980s to the mid-1990s, the TFR with some irregularities maintained around 1.6 level. However, after this period Korea's TFR declined rapidly as the country struggled through the financial crisis in 1997, below 1.2 in the 2000s (especially 1.08 in 2005), the lowest in the world. The number of children per year was over 1 million during the period from 1960 to 1971 but decreased to below half a million since 2002.

II. Causes of Fertility Change in Korea

A. Demographic factors

Demographically, fertility is determined by two factors, female's age at first marriage (FAFM) and fertility rate of married women (marital fertility rate, MFR). The female's age at first marriage was 24.1 years in 1985 but soared-up to 28.1 years in 2007, along with rise in rate of female enrollment in university (FUER) and female labor force participation rate (FLPR). The rate of female enrollment in university increased from 31.3 percent in 1990 to 83.8 percent in 2008. The female labor force participation rate increased from 47.0 percent in 1990 to 50.1 percent in 2007 (42.6 to 68.0 percent for 25~29 age group and 49.5 to 53.6 percent for 30~34 age group, which are in the main age span for first marriage and childbearing). Since most births still come from legally married couples in Korea (98.5 percent as of 2007), the prolonging of age at first marriage has played a role in decreasing fertility level through curtailing the childbearing span and increasing infertility.

The marital fertility rate shows a decreasing trend in most age groups with some recent exceptions at older age groups. For example, the MFR of age 20~24 continued to decrease from 460 per thousand married women in 1970 to 259 in 2004. The MFR of 25~29 was 362 in 1970, which decreased up to the mid-1980s. MFR, with a short-period increase, again turned to decrease since the

Figure 1. Trends in Number of Live Births and TFR, 1970-2007

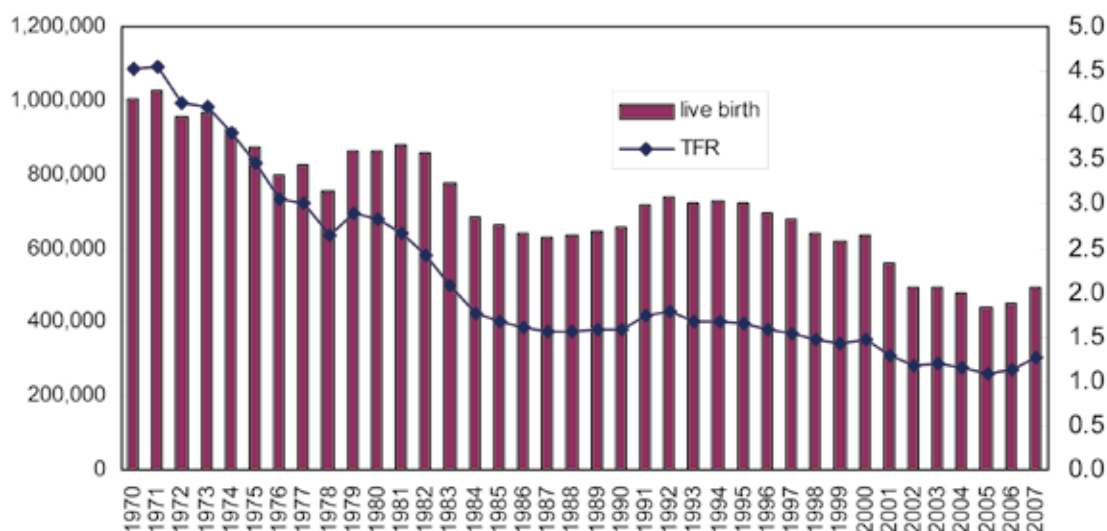


Figure 2. Trends in Female Labor Participation Rate (FLPR), Female University Enrollment Rate (FURE) and Female Age at First Marriage (FAFM) in Korea

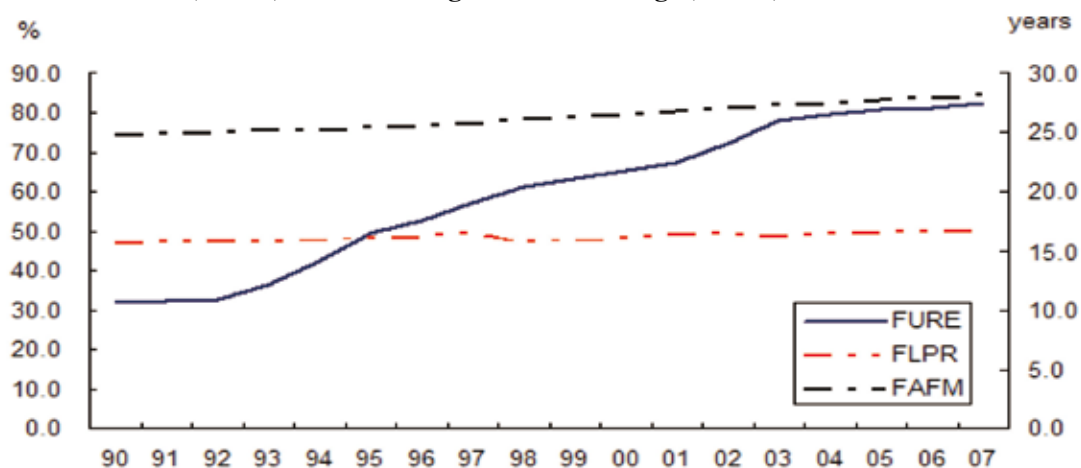
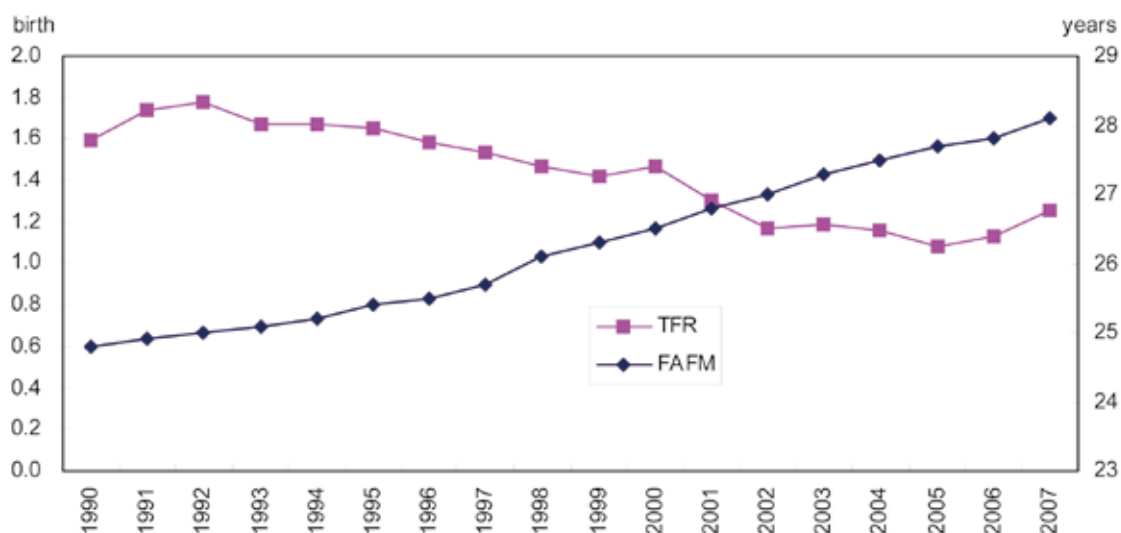


Figure 3. Trends in TFR and Age at First Marriage for Female (AFMF) in Korea



Source : Korea National Statistical Office, KOSIS

Table 1. Change in Marital Fertility Rate in Korea

(unit: number of births per married woman)

Age of Women	1970	1980	1990	2000	2004
20 ~ 24	460.3	405.6	426.3	363.6	259.0
25 ~ 29	362.8	285.4	219.8	254.5	193.4
30 ~ 34	217.5	120.9	54.7	96.8	99.5

Source: KNSO, Causes of Decrease in Number of Births, 2005.

then mid-1990s, reaching 193 in 2004. The MFR are age 30~34 decreased from 217 at age 30~34 in 1970 but turned to increase since the mid-1980, reaching 99 in 2004. Such an age pattern of change

in MFR was attributal to increase in age at first birth and thereby age at births.

The influence of female's age at first marriage and marital fertility rate on TFR has been different

Table 2. Contribution of Female Age At First Marriage and Marital fertility Rate on TFR Decline

(unit : %)					
Factors	1959~1969	1970~1979	1980~1989	1990~1999(1995-1999)	'00 ~ '04
Decrease of MFR	90	85	61	-95(-2)	49.1
Increase of FAFM	10	15	39	195(102)	50.9

Source: Lee, et al, Causes of Low Fertility and Comprehensive Policy Responses, Presidential Committee on Ageing Society and Population Policy, Ministry of Health and Welfare, KIHASA, 2006a.

Table 3. Unmarried People's Attitude on Marriage, 2005

(unit: %)						
	necessary to marry	better to marry	does not matter	better not to marry	do not know	total(n)
single male	29.4	42.1	23.4	2.2	2.9	100.0(1,461)
single female	12.8	36.3	44.9	3.7	2.2	100.0(1,204)

Source: Lee, et al, 2005 National Survey on Marriage and Fertility Dynamics, Presidential Committee on Ageing Society and Population Policy, Ministry of Health and Welfare, KIHASA, 2006b.

by period, Until 1980s the decrease in marital fertility rate was responsible for the rapid decrease in TFR. The TFR decline during the 1990s was caused mainly by the increase in female's age at first marriage rather than decrease in marital fertility rate. However, the rapid decline in TFR during the period of 1999~2004 was attributal to both increase of female's age at first marriage and decrease of marital fertility rate, to the almost similar extent.

B. Socio-cultural and economic factors

Changes in socio-economic circumstances and attitudes on family and child have had an interactive effect on the above demographic factors, and then fertility in Korea. Low fertility rates take place not only for financial reasons but also for socio-cultural reasons, such as deferred marriage and childbearing, of younger generations from individualistic motives (Freedman, 1995). As economic development makes people better off, stabilizationism and individualism dominate their values and young unmarried people rush to consume, deferring marriage and childbearing which lead to low fertility rates (Lesthage et al., 1988). Younger generations tend to go to work stably from their parents' home, depend on their mothers in their daily lives, and enjoy consumption. This trend increases some kind of aristocratic or parasite singles who do not assume the responsibility

to support the family, resulting in lower fertility rates (Atoh, 1998).

There has been a considerable change in values on marriage and child in Korean society; marriage and childbirth are not longer universal values as duties but become a choice. In a 1998 survey by the National Statistical Office, Korea, the ratio of unmarried women polled on the value that people should get married accounted for a very low 20.3 percent with total affirmative responses to marriage, including those who said it is better to get married, being 63.3 percent. According to the 2005 National Survey on Marriage and Fertility Dynamics, 28.6 percent of unmarried men and 50.8 percent of unmarried women have a negative attitude on marriage (KIHASA, 2005). Only one fourth of the women expressed that they must have children.

Married women's views on children have also changed considerably. The ratio of those respondents who answered that people should have children was 40.5% in 1991. The ratio decreased to the 16.2% in 2000 and further fell as low as 10.2 in 2006. People's expectation of their children's utility in the past was mostly a means of securing the family labor force, a source of security in retirement, and a succession of the family line. As social security has developed and consciousness on blood relationships has weakened, more emphasis has been placed on children's values as agents of

emotional dependence and support. The changes in the values on the qualitative utility of children have affected the quantitative value of their numbers, helping to firmly establish people's views favoring a small number of children in Korea.

Socio-economic and individual factors that have had a negative influence on fertility, include increase in uncertainty for the future due to high unemployment among young population, unstable job security, increasing economical burden of child-rearing including costs for private education of children, incompatibility between works and home, lack of infrastructure for child-care, aggravation of reproductive health, etc. These factors have also interactive impact on people's attitudes on marriage and child.

In a broader view, unstable employment and slow business, have been known to be the causes of low fertility rates. Age at first marriage sharply rose and fertility rate dived in Korea after it was hit

hard by the financial crisis in 1997, an indication that a sluggish economy, increased unemployment, and job insecurity are contributing factors to lowered fertility rates. According to 2005 National Survey on Marriage and Fertility Dynamics, main reasons for delaying marriage and childbirth appeared to be individual's unemployment and unstable status of employment.

An increase in educational expenses also helps lower fertility rates. Because of the exorbitant costs of education from preschool to college, parents often put priority on quality rather than quantity and prefer fewer children or no children at all. According to 2005 National Survey on Marriage and Fertility Dynamics, 9.9 percent of the women at age 20~39 ceased their childbirth with 1 child due to burden of childrearing cost and 18.2 percent due to burden of educational cost (those with 2 children were 11.9 percent and 23.8 percent, respectively). This is partly because children

Table 4. Married Women's Attitude on Children

(unit: %)

	must have	better to have	does not matter	do not know	total(n)
1991	40.5	30.7	28.0	0.8	100.0(7,448)
1994	26.3	34.3	38.9	0.5	100.0(5,175)
1997	24.8	35.0	39.4	0.8	100.0(5,409)
2000	16.2	43.2	39.5	1.1	100.0(6,350)
2003	14.1	41.8	43.3	0.8	100.0(6,599)
2006	10.2	39.3	49.8	0.7	100.0(5,386)

Source: KIHASA, National Fertility and Family Health Survey, Each year.

Table 5. Costs for Childcare and Education, Imposing on Household

(unit: thou. won, %)

	1 child family					2 children family	3 children family
	0~2 years	3~5 years	primary sch.	secondly sch.	average		
high Income Household	214(4.8)	432(8.3)	843(16.0)	1,027(20.9)	660(13.6)	898(19.3)	1,160(23.0)
low Income Household	152(8.2)	332(16.7)	362(17.0)	562(26.0)	372(19.6)	505(24.3)	582(26.7)

Note: 1) the criterion is the monthly average income(3,073,029 Korean won) of the nuclear family as of 2003, provided by KNSO.

2) () denotes percentage of cost for childrearing and education to the total income.

Table 6. Number of Childcare Leave

	grant (Mil. won)	childcare leavers			monthly paid per each	ratio of childcare leavers to maternity leavers
		total	female	male		
2003	10,576	6,816	6,712	104	300,000 won	21%
2004	20,803	9,304	9,123	181	400,000 won	24%
2005	28,242	10,700	10,492	208	400,000 won	26%
2006	34,521	13,670	13,440	230	400,000 won	28%
2007	60,989	21,185	20,875	310	500,000 won	36%

Source: Ministry of Labor(2008), 2007 Yearly Statistics of Employment Insurance

are no longer taken as an investment for their parents' old age security, and raising them is now regarded as an opportunity cost for the time and income of the couples, especially for the women. Such burden of child-rearing was also associated with instability of income and housing.

In Korea, women have increasingly participated in economic activities; The economic participation rate of women at age 25-29 increased from 47.9 percent in 1995 to 72.7 percent in 2007 and 47.6 percent to 73.2 percent for the women of 30-34. However, in Korea social circumstances and infra have been not well established in favor of women's compatibility between work and home including childcare. Grant of maternity leave and childcare leave were poor in sustaining household expenditures. Above all, the social-cultural atmosphere such as family-friendly employment and gender-equal family were not well fostered. For example, working mothers spent 197 minutes on house chores and childcare but her husbands spent only 72 minutes, on average, in a working day (Lee et al., 2006b). Childcare services and facilities were inappropriate for various demands of working mothers, in both sides of quantity and quality. For example, the provision of childcare facilities met only 30 percent of demand as of 2005(Lee et al., 2006b). Culturally, Korean men's roles in housework remains more or less the same as in the past, characterized by patriarchy. As balancing housework and economic activities emerges as a greater challenge to women, they tend to have children as late, and fewer, as possible and some even do not want any at all. Eventually, women have to choose one between job and housework, in Korean society. According to 2005 National Survey on Marriage and Fertility Dynamics, 60.6 percent of the working women was out of work due to marriage and 49.8 percent due to first childbirth.

One thing that distinguishes Korea from such

Western countries as France and Sweden is that in Korea premarital childbirth is strongly suppressed both socially and individually. The socio-bio gap between the age at marriage and sexual activities has increased the number of premarital pregnancies. However, in Korea where ceremonial marriage is established as a strong social norm and extramarital childbearing is not socially accepted, most such pregnancies end up being compulsorily aborted for reasons of society's cold treatment and criticism. According to a 2005 survey (Ministry of Health and Welfare), 42 percent of some 350,000 induced abortions that take place annually are carried out on unmarried pregnant women. This shows that Korea's fertility rates are more directly affected by nuptiality; an increase of age at marriage leads to a decrease in fertility rates.

III. Policy Response to Low Fertility in Korea

A. Shift of population policy

In Korea, the national family planning program, as a major means of population control policy, was adopted in 1962. This program includes the demographic target of reducing the annual population growth rate and the total fertility rate, and it was vigorously implemented as a categorical program through the successive five-year economic development plans. The strength of family planning program lied in its limited goals, the acquisition of resources and the building of an organizational process specifically for the demographic goals. Also, commitment to family planning goals led to development of extensive linkages with other sectors such as the mass media, and private practitioners' clinics and hospitals.

As a result of these efforts by the government in increasing population control programs, fertility took a drastic downturn in the 1980s. In 1988 the national family planning program in Korea achieved its primary objectives of reducing the

fertility rate to below the replacement level and accomplishing near universal contraceptive use. As a result, since the late 1980s the government began to move away from its policy on free contraceptive distribution through government programs toward a self-paid system, administered by private and commercial sectors, such as the nationwide health insurance program.

Nevertheless, no sooner was one set of problems overcome than new challenges of a totally different nature arose out of the resulting decreased fertility rate. Some of the unfavorable consequences of rapid fertility decline in Korea include an unbalanced sex ratio, an increase in the elderly population, and a high prevalence of selective abortions. In order to deal with these new problems, it became apparent that Korea would have to shift its population policy directions in a way that best reflected the changing socio-economic and demographic conditions currently being witnessed and forecast for the immediate future.

For this purpose, the government established

a Population Policy Deliberation Committee in December 1994 to review population policy by focusing on its past accomplishments and future prospects, as well as related socio-economic problems, in an effort to work out new policy directions and measures for the 21st century. In 1996, the government officially adopted new population policy with emphasis on reproductive health care services.

As the fertility rate has, however, continued to decrease, a Committee on Ageing and Future Society (CAFS) was established to prepare policies and programs for pro-natality and preparations for the coming aged society in 2003. The Basic Law on Low Fertility and Aged Society was promulgated in May 2005. In June 2006, the Presidential Committee on Ageing Society and Population Policy, upgraded from by CAFS, promulgated the First Basic Planning for Low Fertility and Aged Society(2006-2010).

Table 7. Policy Measures for Fostering Environments favorable of Childbirth and Childcare in Response to Low Fertility: strengthening responsibility of society for child-birth and child-rearing

1-1. attenuating socio-economic burden of childcare for family with children	1) extending supports for costs of child care and pre-school education	<ul style="list-style-type: none"> • support for daycare and pre-school education for 0-4 years old children (subsidy) • support for free daycare and pre-school education for 4 years old children (free of charge) • support for daycare and education for the family with two children or more
	2) expanding the after-school education to attenuate the economical burden of households	<ul style="list-style-type: none"> • improvement of after-school education system and support for the low income class • provision of voucher for low income class • expansion of primary daycare • integration of after-school daycare and education • improvement of cyber home education
	3) expansion of tax and social insurance benefit for the family with many children	<ul style="list-style-type: none"> • revision of taxation system in favor of the family with many children • revision of assessment system for health insurance fee • introduction of credit system in national pension
	4) providing various incentives for families with children	<ul style="list-style-type: none"> • support for stability of housing for families with children • providing priority to use of daycare facilities for families with children
	5) reinforcing supports for the adoption family	<ul style="list-style-type: none"> • improvement for perception on adoption • strengthening support for adopting families • support for fees of adoption • support for free daycare and pre-school education • introduction of adoption allowance • increase in subsidy and medical cost for the adopters of disabled children

1-2. expanding childcare infra, with diversity and good quality	1) expanding public and workplace childcare facilities	<ul style="list-style-type: none"> • expansion of public childcare facilities • establishment of and support for integrated day-care facilities • expansion of workplace childcare facilities
	2) improving quality of service in the private child-care facilities	<ul style="list-style-type: none"> • support for improvements of private child-care facilities's services • enforcement of evaluation certification for child-care facilities
	3) extending child-care service to meet diversified demands	<ul style="list-style-type: none"> • expansion of prolonged daycare services • expansion of all-day nursery school • support of helpers for parttime daycare facilities • establishment of and support for daycare facilities within cultural facilities
1-3. expansion of support for pregnancy and childbirth	1) establishing the health and nutrition system for maternity and children	<ul style="list-style-type: none"> • establishment of professional centers for health of maternity and infant • establishment of basis for systematic health management of new born babies • provision of credible information and counselling services for childbirth and childcare • support for reproductive health program • expansion national prerequisite vaccination • expansion of support for health diagnosis and nutritional management for maternity and infants • nutrition-supplementary management for maternity and infants • expansion of support for breast-feeding • protection of maternity from inadequate induced abortion
	2) providing economical support for couples suffering from infertility	<ul style="list-style-type: none"> • support for costs of test-tube baby
	3) aids for postpartum care and new-born infants of the poor class	<ul style="list-style-type: none"> • provision of helper service for maternity protection

Source: Korean Government, The First Basic Planning for Low Fertility and Aged Society(2006-2010), 2006.

B. Policy Responses to Low Fertility

The First Basic Plan for Low Fertility and Aged Society (2006-2010), which was set-up in 2006, aims to foster environments in favor of child-rearing, to establish the base for improving quality of life in the aged society, and to secure power for economic growth in low fertility and aged society. The First Plan will be followed by the Second Plan (2011-2015) with the aim of steady recovery of fertility rate and consolidation of the social system for the aged society, and then by the Third Plan (2016-2020) with the aim of increase of fertility rate to the average level of OECD countries and successful adaption for the aged society.

In efforts at fostering environments appropriate for child-rearing, the Plan adopts strengthening responsibility of society for child-birth and child-rearing, fostering the family-friendly and gender-

equal socio-culture, and raising future generation wholesomely.

Firstly, responsibility of society for child-birth and child-rearing will be strengthened by the following measures; 1) extending supports for costs of child care and education, and expanding the after-school education to attenuate the economical burden of households; 2) providing various incentives for families with children; reinforcing supports for the adoption family; expanding public and workplace childcare facilities, improving quality of service in the private child-care facilities, and extending child-care service to meet diversified demands; 3) establishing the health and nutrition system for maternity and children, providing economical support for couples suffering from infertility and aids for postpartum care and new-born infants of the poor class.

Table 8. Policy Measures for Fostering Environments favorable of Childbirth and Childcare in Response to Low Fertility: fostering of the family-friendly and gender-equal socio-culture

2-1. increasing compatibility between works and home.	1) expanding government's supports for maternity leave grant	<ul style="list-style-type: none"> • support for small-medium establishments in paying grants • providing grants for abortion and stillbirth leave • introducing partner's childbirth nursery leave
	2) diversification of childcare leave and flexibility of labor conditions	<ul style="list-style-type: none"> • activation of childcare leave • introduction of curtailed labor hours during childcare period • increasing flexibility of working pattern
	3) support the women's return to the labor market after their childcare	<ul style="list-style-type: none"> • expansion of support for subsidy for women's return to work after childbirth • support for subsidy for continuing employment of the temporary workers after their childbirth • operating programs of housewives' return to labor market • operating manpower bank of women with career stopped
	4) support for the family-friendly establishments	<ul style="list-style-type: none"> • development of model for operating family-friendly enterprisers • support for family-friendly enterprisers such as providing enterprisers' certificate • development and spread of family-friendly education programs
2-2. formulating gender-equal family and social culture	1) strengthening school and society educations and intensified publicity in lifetime	<ul style="list-style-type: none"> • school and society educations and intensified publicity in lifetime
	2) strengthening the ties between the family members	<ul style="list-style-type: none"> • provision of educational program and family counselling for family life • supports for family leisures and culture • accommodating family-friendly community environment

Source: Korean Government, The First Basic Planning for Low Fertility and Aged Society(2006-2010), 2006.

Secondly, fostering of the family-friendly and gender-equal socio-culture is to be achieved by the following measures; 1) increasing compatibility between works and home through expanding government's supports for maternity leave grant, support for the women's return to the labor market after their childcare, diversification of childcare leave, flexibility of labor conditions, and aids for the family-friendly establishments; 2) formulating gender-equal family and social culture by educational programs at both school and society, and intensified publicity; and strengthening the ties between the family members through supports for family leisures and culture, and provision of educational program for family life.

Thirdly, raising future generation healthy is to be realized through providing children and youths with safe environments, and observing children's rights.

IV. Policy Responses and Recent Fertility Trends

Although public concerns started since 2002 and some policy measures were enforced in 2003 to 2005, it is the only the mid-2006 in Korea when the comprehensive policy response in an omnidirectional way with a name of the First Basic Plan for Low Fertility and Aged Society started, Therefore, it needs some more times for its authentic evaluation.

However, it is notable that the number of children increased for the first time since 1994 from 438 thousands in 2005 to 452 thousands in 2006 and 497 thousands in 2007, increasing TFR from 1.08 in 2005 to 1.13 in 2006 and 1.26 in 2007. The only exception was in 2000, when the number of births increased, due to new millenium baby-boom.

From such a short-period result, it may be too early to note that the Korean fertility reached its lowest point in 2005 and thereafter turned toward

an increasing trend. However, such an increase is worth to be analyzed for future efforts to overcome the lowest fertility trends in the Korean context. The main factors to be considered include change in demographic features such as age structure of women in childbearing period, and impact of socio-economic changes such as economic cycle, policy implementation, public concerns and atmospheres, etc.

A. Demographic effect

The recent increase in number of live births turned out to be attributal to change in fertility rather than in age structure of women in childbearing period. The rise in fertility accounted for 141.5 percent of increase in number of live births in 2006 compared to 2005, meanwhile change in age structure of women in childbearing period played a negative role to decrease the number of live births. The same result came true even in 2007, the fertility increase accounting for 114.5 percent of increase in live births. The difference between 2006 and 2007 was that the negative effect of the age structure change decreased to some extent.

However, contributions of two demographic factors to recent increase in fertility level among age groups of women in childbearing period. For 20-24 age group, both fertility and number of women decreased, having a negative impact on overall fertility level, between the period 2005 and 2006. However, its fertility rose to increase in number of live births, even if there was a decrease in number of women in that age group. For 25-29 age group, number of women increased but fertility decreased in 2006, contributing negatively to overall fertility level. In 2007, its fertility and number of women in that age group increased, leading the increase in number of live births. For 30-34 age group, the number of women decreased but fertility increased to a greater extent in 2006 and 2007, having positive effects on overall fertility level. For 35-39 age group, number of women and fertility increased in 2006 and 2007, making the number of live births in this age group increase. A greater contribution was made by increase in the magnitude of women in age group of 25-29; due to 'post-baby boomers' who were born in the period between 1979 and 1982 and whose marriages has recently increased,

Figure 4. Contribution of change in fertility and women's age structure to 2006-2007 increase in number of live births

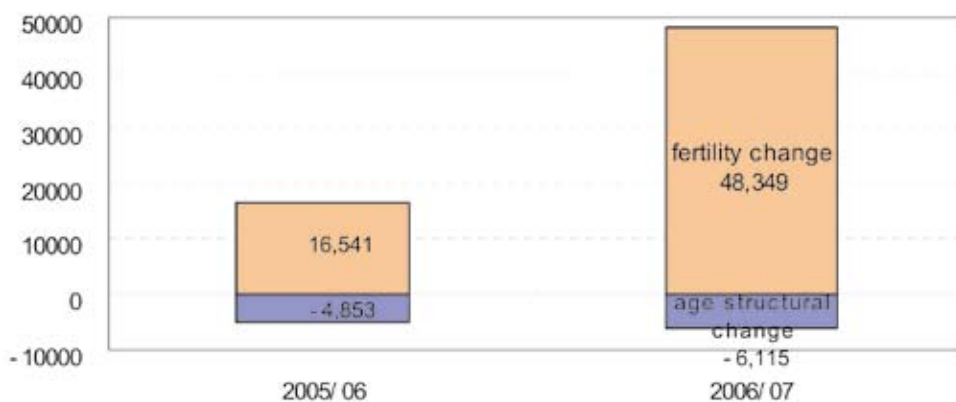


Figure 5. Trends in number of live births born between 1974-1985

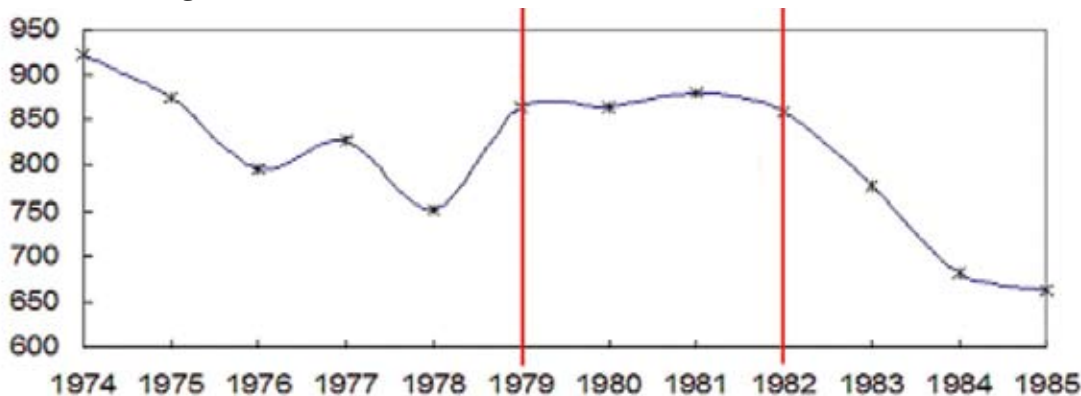
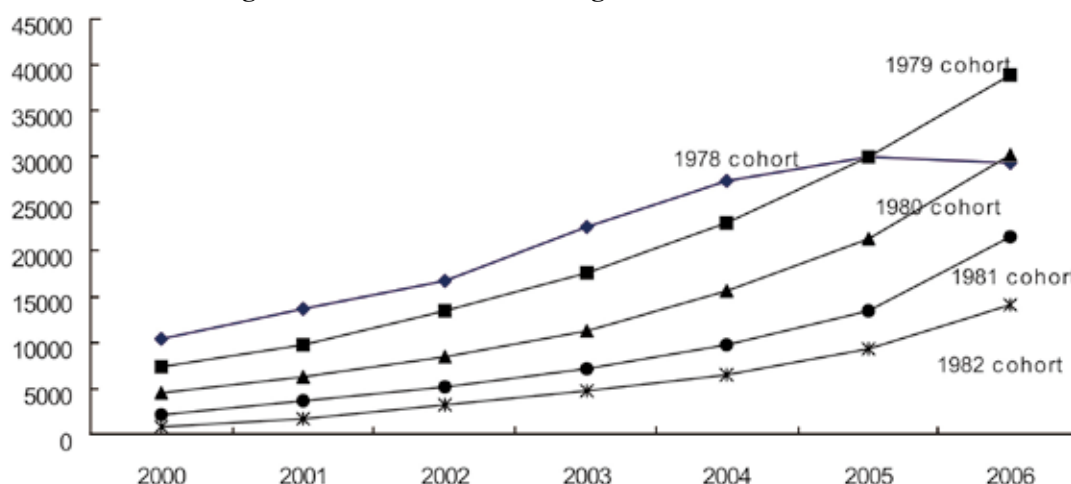
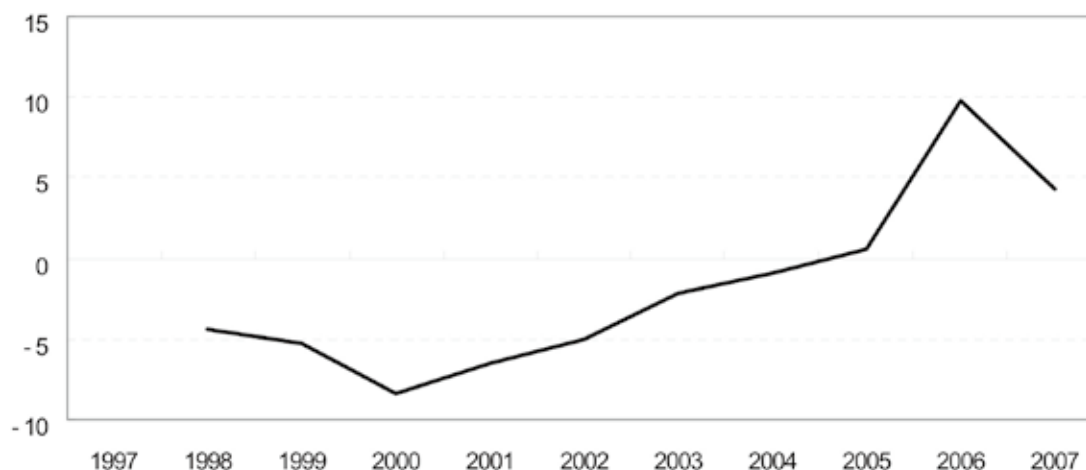


Figure 6. Trends in first marriages of 1979-1982 cohorts



Source: KNSO.

Figure 7. Increase rate in first marriages of women under 35 years old



as seen in Figure 4 and Figure 5.

Thus, the number of first marriage from women under 35 years old increased from 236 thousands in 2004 to 259 thousands in 2006 and 268 thousands in 2007. It was due mainly to the entry of post-babyboomers into marriageable ages and the increase of the delayed marriages. The latter may be coincident with increase in age-specific marriage rate in recent years.

B. Economic effect

In general, there is a positive relationship between economic cycle and fertility rate: as economic conditions improve, employment rate and income level increase and thereafter marriage and fertility rate increase, and vice versa. It might be noted that in Korea the recent increase in TFR (empirically for the years of 2006 and 2007) was attributable to economic recovery accompanied by rise in

employment rate since 2003. Despite economic recovery since 2003, fertility rate increased form 2006. Such a 3-year time-lag could occur for change in attitudes, making-decision for marriage or childbirth, and pregnancy after change in economic situation.

C. Effect of policy responses

It is really difficult to measure the effect of policies on fertility change, specifically after short term of their implementation, since many factors including policy have intermingled effect on fertility. Nonetheless, an analysis was done to monitor the operation of various policy measures in Korea. In Table 9, we can see a greater jump of output from policy responses since launching of policy response in 2006.

KIHASA in collaboration with Ministry of Health, Welfare and Family conducted 2006

Figure 8. Real GDP Growth Rate and TFR, 1970-2006

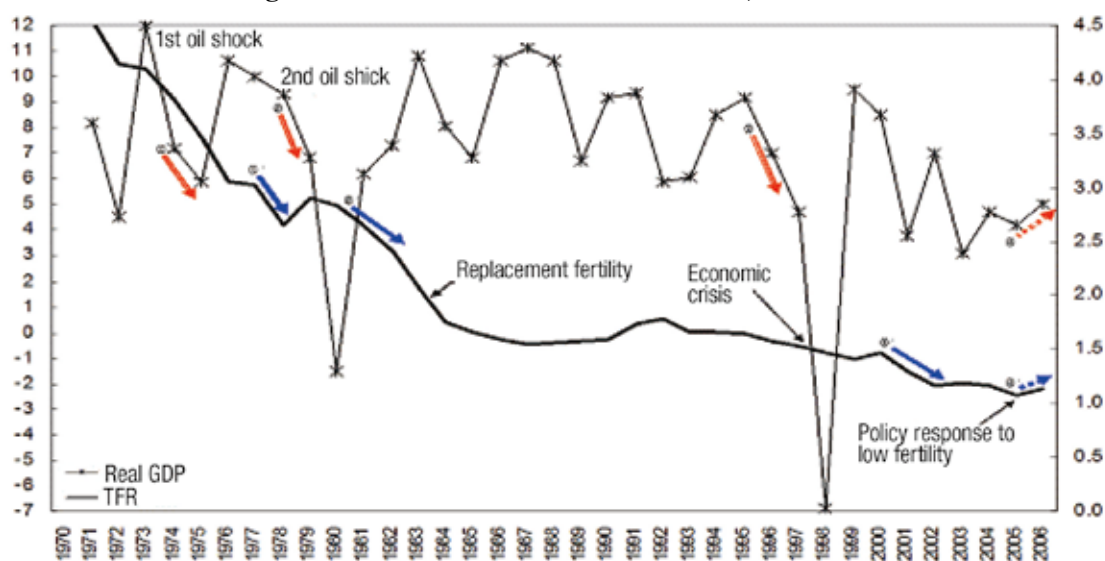


Table 9. Some outputs of recent policy responses

	2003	2004	2005	2006	2007
rate of children subsidized for childcare and pre-school education	7.5	11.0	21.9	30.5	40.0
attendance rate in after-school education	-	36.3	37.9	41.6	49.8
No. of public and workplace childcare facilities	4,405	6,245	14,459	17,211	17,650
No. of children attending prolonged daycare services	4,405	6,218	14,395	17,138	17,572
Ratio of all-day nursery school to the whole	-	27.3	63.8	73.3	78.5
Ratio of mother benefited from service for maternity protection	-	-	-	99.5	108.3

Source: Korean Government

National Fertility Dynamics Survey in 2007 and 2007 National Fertility Dynamics Survey in 2007, respectively. A logistic model was applied to the result of the 2007 National Fertility Dynamics Survey. As a result, policies that had positive effect, with statistical significance at $p < 0.001$, on transference from the 1st birth to 2nd birth appeared to be policy for establishing the health and nutrition system for maternity and children, policy for increasing compatibility between works and home, support policy for costs of child care and pre-school education, in that order. The policies having a positive effect on transference from the 2nd birth to 3rd birth include support for costs

of child care and pre-school education, policy for raising compatibility between works and home, policy for establishing the health and nutrition system for maternity and children, in that order .policies that had positive effect, with statistical significance at $p < 0.001$, on appeared to be policy for establishing the health and nutrition system for maternity and children, policy for increasing compatibility between works and home, support policy for costs of child care and pre-school education, in that order.

Reference group: mother's age (>35), mother's educational attainment ((high school or less), household income (100% or higher than average

level), economical activity (unemployed), economical status (unpaid workers)

V. Concluding Remarks

It may be concluded that increase in fertility level in recent years seemed to be attributable to change in demographic factors (mainly increase in number of women in childbearing age and marriages, especially for 25-29 age group), economic recovery, and policy responses, with interactive effect. From such a result, several scenarios or expectations can be made.

Firstly, it can be expected that if some demographic factors favorable to the recent increase in fertility wane, Korean fertility level will decrease again or be stable at the same level in the future.

Secondly, if the economic recovery helped increase marriages and fertility level, the worldwide financial crisis in 2008 may be expected to discourage marriage and childbirth in the future.

Thirdly, the effect of policy responses may be temporary since the policy response coincided with the other factors in favor. However, the effect of policy response may be diminished if the measures cannot overcome their inherited weakness.

It may be worth to put a more emphasis on policy efforts to increase the fertility rate to the sustainable level in the near future, since the demographic structure such as decrease in number of women in childbearing period, economic situation, etc. can be aggravated in the future. Some suggestion for future improvement in policy

Table 10. Effect of policy responses for 2007: logistic regression

variables		first to second childbirth		second to third childbirth	
		B	Exp(B)	B	Exp(B)
mother's age	20	-0.37	0.69	-0.11	0.89
	30-35	0.61**	1.85	0.12	1.13
mother's education	college or higher	0.22	1.25	-0.14	0.87
household income	80% or lower than average	0.66**	1.94	0.01	1.01
	80~100%	-0.04	0.96	-0.25	0.78
economical activity	high class	-1.26***	0.28	-1.29***	0.28
	low class	-1.65***	0.19	-0.99***	0.37
economical status	paid workers	-0.15	0.86	-0.65***	0.52
Support for childcare & pre-school education		0.66***	1.93	1.23***	3.42
Tax & social insurance relief		0.21	1.24	-0.23	0.79
health & nutrition system for maternity & children		1.16***	3.20	0.40**	1.49
support for infertility		0.77	2.17	1.10	3.01
compatibility bet. works & home		0.68*	1.98	1.19***	3.28
Constant		-0.30	0.74	-0.27	0.76
case(d.f.)		816(13)		916(13)	
-2 LL(X ²)		796(180.4***)		1,084(173.1***)	

Note: * p<0.05, ** 0.01<p<0.05, *** 0.01<p<0.001

*

response to low fertility are as followings;

- 1) Most of support for daycare, education, healthcare, etc. are too confined to low income class. It needs to expand the programs to all classes as early as possible.
- 2) It needs to increase the number of items and benefits, covered by Health Insurance System, since the medical costs for both preventive and curative purposes are too expensive for the families, especially with many children. It also needs to extend the benefits of certain insurance items to the older children such as high school students.
- 3) It needs to increase benefits of childcare leave to replace wage for the life of family. This will play a very important role in activating childcare leave system to increase compatibility between work and home.
- 4) Currently, the government's support is to cover a part of cost for daycare and medical care, which is covered by Health Insurance System. And most of the support tends to be confined to the low income class. In Korea, the cost of layette including clothing and food is expensive, from which the family with children suffer. In order to practically attenuate the family's burden for childcare, it needs to introduce the child allowance and education allowance, which covers all children under certain age, regardless of order of birth and without mean tests. Those allowances will help the families to rear their children in a better condition and will thereby help the fertility level to increase. The education allowance needs to be operated until the public education being realized.
- 4) An emphasis on men's obligations to housework will make it easier for women to balance child-rearing and work, positively working on having children. On the other hand, enhanced gender equality will help more women to take part in economic activities and have fewer children than in the past.
- 5) Although the lowest fertility was greatly attributable to postponement and giving-up of marriage, the policy measures for raising the marriage rate were not included in the First Basic Plan, Currently, some local governments and private organizations devoted themselves to providing unmarried people with information and mediation to increase opportunities for marriage. The postponement and giving-up of marriage has been strongly associated with economic situations and change in values on marriage and childbirth. Therefore, it needs to provide the

youth with employment opportunities with stable status as well as to put an emphasis on values in favor of marriage and children from their early ages under school and social education system. In addition, policy measures, rather systematical and effective, for encouraging and facilitating marriages need to be designed to enable the single males and females to marry at the time they desire to.

- 5) In order to avoid duplicity and maximize effectiveness, all responses need to be designed in an integrated manner which can bring the synergy effects, in making circumstances favorable to child care and increasing the fertility level.
- 6) It needs to increase investments for the future generations. Currently, Korea Government plans to spend 19 trillion won, which is quite lower than those of OECD countries. Enlightenment and appeal with small investment would have limitations to achieve the reasonable fertility level for the future.

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