
UN/POP/PRA/2000/11
15 August 2000
ENGLISH ONLY

**EXPERT GROUP MEETING ON POLICY RESPONSES TO
POPULATION AGEING AND POPULATION DECLINE**

Population Division
Department of Economic and Social Affairs
United Nations Secretariat
New York, 16-18 October 2000

**POLICY RESPONSES TO POPULATION AGEING AND
POPULATION DECLINE IN KOREA ***

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Policy Responses to Population Ageing and Population Decline in Korea

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A. Introduction

The Republic of Korea has undergone demographic changes at a pace that has dazzled many population scientists. Fertility has declined to a level far below the replacement level within a short span of two and half decades. Concerted government policies and family planning programmes played a major role in achieving this momentous transition. The total fertility rate in Korea rapidly decreased from 6.0 in 1960 to 1.6 in 1987. Thereafter, the total fertility rate fluctuated between 1.7 and 1.8, but has recently decreased further to 1.48 in 1998 (NSO, 1999a). It is estimated that if the current low fertility continues, the population in Korea will stabilize at around 52.8 million people by the year 2028, and will begin to decrease thereafter.

Socio-economic development factors which have resulted in the decline in fertility include rapid urbanization, increase in educational and economic participation of females, increase in educational attainment of both males and females, and reduction in infant and child mortality rates. Other factors, which have affected the Korean fertility, equally important to the aforementioned factors, include changes in the value on or preference for the number of children, family structure, marriage behavior, role and function of the family, especially in support for the elderly. In addition, improvement in nutrition, improvement in health status, change in life style, etc, which are often concomitant with socio-economic development, have played a role in reducing mortality, including infant and maternal mortality rates, thereby resulting in a considerable rise in life expectancy. Life expectancy at birth was 52.4 years for both sexes in 1960 but increased to 74.4 years in 1997 (NSO, 1999b).

The decline in fertility in Korea has been attributed to the increase in proportion of single women and the changing attitude of women concerning child berth. The proportion of women who have never married, increased from 57.3 percent for the 20-24 year age group in 1970, to 83.3 percent in 1995. There has also been an increase in the proportion of women who have never married in the 25-29 and 30-34 age groups. The proportion for the 25-29 age group was only 9.7 percent in 1970 but was 29.6 percent in 1995, and the 30-34 age group increased from 1.4 percent to 6.7 percent during the same period. The proportion of single women is expected to increase continuously in the immediate future (NSO, 1996).

Although achievements have exceeded expectations in terms of the population goals in Korea, several new population problems have emerged. These new problems must be faced with the same determination and imagination that were used to solve the population problems in the past. Major consequences resulting from the rapid fertility decline include the shrinking of the labor force and the growth of the elderly population. There is a range of policy options available and measures that can be taken in response to labor supply problems. Concentration on capital-intensive production, raising retirement ages and greater labor force participation by women are among the obvious choices.

The growth in the number of elderly people poses the single most difficult challenge. Moreover, elderly people are living longer, which means that they are more susceptible to chronic health problems which may demand long-term treatment and nursing care. The implications of the decline in fertility and changes in population structure are serious and crucial important matters in terms of health and pension expenditures in the immediate future.

Thus, the present paper explains 1) the demographic prospects in Korea during the next half century, in comparison with the UN estimates, 2) the possible consequences of population decline and population ageing, and 3) the various policy options.

Table 1. Trends in Total Fertility Rate(TFR) in Korea, 1960-1998

(Unit: per woman)

Year	1960 ¹⁾	1974 ²⁾	1984 ²⁾	1987 ²⁾	1990 ¹⁾	1993 ²⁾	1996 ²⁾	1998 ¹⁾
TFR	6.0	3.6	2.1	1.6	1.6	1.8	1.7	1.48

Source: 1) National Statistical Office (NSO), *Report on Vital Statistics Based on Vital Registration*, each year.

2) Korea Institute for Health and Social Affairs (KIHASA), *National Fertility and Family Health Survey*, each year.

Table 2. Trends in Socio-economic Factors Affecting Decline in Fertility, 1960-1998

	1960	1970	1980	1990	1995	1998
Female education(%) ¹⁾	13.0	23.5	45.0	88.2	95.8	-
Female LFPR(%) ²⁾	36.3 ³⁾	39.3	42.8	47.0	48.3	47.0
Age at first marriage for females(yrs)	21.6	23.3	24.1	24.9	25.4	26.2
Proportion of single female(%)						
20-24		57.3	66.1	80.4	83.3	
25-29		9.7	14.1	22.1	29.6	
30-34		1.4	2.7	5.3	6.7	
Urbanization(%)	28	41	57	74	78	-
Infant mortality rate	-	45	17('81)	13('87)	9.9('93)	7.7('96)

Note: 1) Proportion of females aged 20-24 who have attended secondary school or over.

2) Labor force participation rate.

3) Survey conducted in 1963, among persons 14 years of age or over.

Source: NSO, *Population and Housing Census Report*, each year.

NSO, *Annual Report on the Economically Active Population Survey*, each year.

KIHASA, *1998 Health and Welfare Indicators in Korea*, 1998.

Ministry of Health and Welfare and KIHASA, *1996 Infant and Neo-natal Mortality and Causes of Death in Korea*, 1998.

B. Population Prospects for the Next Half Century

The National Statistical Office(NSO) projected the Korean population in 1996, based on the result of the 1995 Population and Housing Census. The assumptions for the 1996 population projection, which is the most recent study available, reflected the past trends in the components of population change; namely fertility, mortality, and migration. The national population projection (NSO, 1996) assumed the total fertility rate would remain 1.7 by 2015 and thereafter increase to 1.8, which would be maintained at the medium variant. As a mortality assumption, the 1996 projection assumed the life expectancy at birth for 2000 as 71.02 years for male and 78.64 years for female, which would increase to 75.4 and 82.5 years, respectively in 2030.

As for the international migration assumption, the number of emigrants increased due to the increasing number of students and the employed, who went abroad for the purposes of study and employment. However this increase was offset by the rise of the number of the foreign worker migrants; thus, the 1996 population projection assumed that the total number of net-migrants as minus 30,000 for the future migrants, which is the average of net-migrants during 1990-1995. This study makes an attempt to project the future population, adopting the same assumptions used by the 1996 projection, which included only the mortality change, from 2000 to 2050. It is as extended from the 1996 projection (at the medium variant) by NSO, which projected the population up to the year 2030.

Table 3. Assumptions for National Population Projection for 2000-2050

(Unit: per woman, years, persons, per 100 female live births)

Year	TFR (medium)	Life Expectancy at Birth		Net-migrants	Sex ratio
		Male	Female		
2000	1.71	71.02	78.64	-30,000	112.7
2005	1.71	72.27	79.74	-30,000	110.7
2010	1.74	73.27	80.69	-30,000	108.9
2015	1.80	73.87	81.19	-30,000	107.0
2020	1.80	74.47	81.68	-30,000	107.0
2025	1.80	74.97	82.09	-30,000	107.0
2030	1.80	75.42	82.45	-30,000	107.0
2035	1.80	76.67	83.70	-30,000	107.0
2040	1.80	77.92	84.95	-30,000	107.0
2045	1.80	79.17	86.20	-30,000	107.0
2050	1.80	80.47	87.45	-30,000	107.0

Source: NSO, *Future Population Projection*, December 1996.

According to the 1996 projection and extended projection conducted through this study, a zero population growth rate will be reached in 2028 with a population size of 52.8 million, and thereafter the Korean population will decrease to 51.5 million in 2050. The absolute size of the working age population will start decreasing after reaching its peak (36.5 million) in 2018 as the declining youth population enters the working age. The aged population of 65 years or over has continued to and will increase with a high growth rate of approximately 4 percent per annum, with the increase in life expectancy. The proportion of the elderly reached 7 percent in 2000 and will double (14.3%) in 2022, indicating that Korea has become an ageing society. The potential support ratio will decrease from 10.0 in 2000 to 4.1 in 2025 and 2.2 in 2050.

Here, the national projection was compared to the UN projection, made by United Nations Population Division(UN, 2000). Although the UN projections were made with various scenarios from I to V, the national projection can be compared to the UN projection of scenario I, at least in terms of the migration assumption. The national projection assumed an annual net-migrants 30,000 to 2030 and the UN projection of scenario assumed the total net-migrants of 450,000 from 1995 to 2020 and thereafter zero. The other UN scenarios assumed no migration. The national projection shows that the total population will be at a peak in 2028 with the size of 52.8 million, whereas the UN projection shows a peak point in 2035 with the maximum size of 53.0 million. The absolute size of the working age population will reach a peak in 2018 with the size of 36.5 million in the national projection, compared to the year 2020 with the size of 36.3 million in the UN projection.

A main feature of the comparison between these two projections is that the youth population and the working age population will decrease faster in the national projection than in the UN projection; and the aged population will increase speedier in the national projection than in the UN projection. Influenced by increase in an old population rather than decrease in young population, the total population will decrease faster in the national projection than in the UN projection. As a result, the potential support ratio will decline faster in the national projection than in the UN projection.

As for the net-migrants, both average and total net-migrants are bigger in the national projection than in the UN projection; such a difference is simply a result of the difference in the assumptions adopted by the projections. Although there are some differences in the main results between two projections, it is evident that the Korean population will be rapidly ageing with both youth and working age populations declining after certain years.

Table 4. National Population Estimate in Korea, 2000-2050: Medium Variant
(Unit: thousand, %)

Year	Total Pop.		0 ~ 14		15 ~ 64 ¹⁾		65 or over ²⁾		Ratio ³⁾
	N	%	N	%	N	%	N	%	
2000	47,275	100.0	10,233	21.7	33,671	71.2	3,371	7.1	10.01
2005	49,123	100.0	10,421	21.2	34,450	70.1	4,253	8.7	8.10
2010	50,618	100.0	10,080	19.9	35,506	70.1	5,032	10.0	7.06
2015	51,677	100.0	9,515	18.4	36,316	70.3	5,846	11.3	6.21
2020	52,358	100.0	9,013	17.1	36,446	69.7	6,899	13.2	5.29
2025	52,712	100.0	8,633	16.4	35,465	67.3	8,613	16.3	4.12
2030	52,744	100.0	8,448	16.0	34,130	64.7	10,165	19.3	3.36
2035	52,896	100.0	8,338	15.8	32,877	62.2	11,681	22.1	2.81
2040	52,810	100.0	8,175	15.5	31,584	59.8	13,051	24.7	2.42
2045	52,327	100.0	7,922	15.1	30,764	58.8	13,641	26.1	2.26
2050	51,546	100.0	7,687	14.9	29,935	58.1	13,924	27.0	2.15

Note: 1) Year of reaching a peak in the absolute size of working population:2018 with 36.5 million

2) Ratio of the elderly population aged 65 or over: 7.1% in 2000 and 14.3% in 2022

3) Potential supportive ratio: persons of working age per each person aged 65 or older.

Source: United Nations, Replacement Migration, 2000. NSO, Future Population Projection, 1996.

Table 5. Comparisons of Korean Population Estimates between National Median Variant and UN Scenario I
(Unit: thousand, each)

	National Projection			UN Projection		
	2000	2025	2050	2000	2025	2050
Total population	47,275	52,712	51,546	46,844	52,533	51,275
0-14	10,233	8,633	7,687	10,068	8,956	8,209
15-64	33,671	35,465	29,935	33,623	35,557	30,401
65+	3,371	8,613	13,924	3,152	8,020	12,665
Potential supportive ratio	9.99	4.12	2.15	10.67	4.43	2.40
Average annual No. of migrants ¹⁾		-30	-30		-14	0
Total no. of migrants ¹⁾		-750	-750		-350	0

Note: 1) The migration statistics are for the year of 2000, 2025, and 2050, respectively.

Source: Same as in Table 4.

C. Socio-economic Consequences of Demographic Transition

1. Labor Shortage and Ageing

The population ageing and decline in growth rate has already led to the labor shortage in some sectors. The labor shortage, as measured by the vacancy rate (the ratio of unfilled vacancies to current employees) has been serious, specifically for the production workers (mostly unskilled workers), which causes the small and medium sized manufacturing firms to suffer from labor shortage. The labor shortage rate has maintained at 2 to 5 percent during the last ten years and that for the unskilled has increased to more than 10 percent.

This labor shortage might be attributable to the accelerated GDP growth, which led to an excessive demand for labor in the manufacturing sector, increase in the labor force with higher educational attainment (in 1996, about 62 percent of the labor force were higher educated and about 20 percent graduated college or university). But it seems to be related to the change in the age structure of the population, which implies that this phenomenon will be structural and long-term.

Table 6. The Vacancy Rate in Korea, 1984-1997

(Unit: %)

Year	All establishments	Production workers	Unskilled workers	Year	All establishments	Production workers	Unskilled workers
1984	2.98	3.95	8.02	1991	5.48	9.07	20.13
1985	1.75	2.35	4.90	1992	4.26	6.76	10.86
1986	2.30	3.20	8.34	1993	3.62	6.04	14.74
1987	3.29	4.79	11.12	1994	3.57	5.64	12.90
1988	3.54	5.24	12.29	1995	3.71	5.80	11.41
1989	3.21	4.92	11.82	1996	2.98	4.80	16.24
1990	4.34	6.85	16.23	1997	2.44	3.88	12.58

Note: 1) The ratio of unfilled vacancies to current employees

Source: Ministry of labor(MOL), *Labor Demand Trend Survey Report*, each year.

There has been an increasing trend in the number of foreign workers who have moved to Korea in the 1990s. This phenomenon is a result of the high growth of the Korean economy during the 1990s which has caused a rise in wages and subsequently, level of income, so that domestic laborers have developed a tendency to avoid difficult, dirty, and dangerous work. As a result, there has been shortage of labor in small and medium manufacturer establishments. Foreign labor is inclined to work in Korea due to the high wages and also because small and medium manufacturing establishments prefer foreign workers who are not reluctant to participate in hard and dangerous work for cheap wages.

As can be seen from Table 7, the total number of foreign workers, legal and illegal, was estimated as 81,824 in 1994 and 210,494 in 1996, showing an increase of 157.3 percent during two years. In 1996, approximately 61 percent of all foreign workers were illegally employed, in comparison to 58.9 percent in 1994. However, the economic crisis which began in 1997, has had an impact on the movement of foreign workers; the number of foreign workers working in Korea was 157,689 in 1998, which is a decrease of 25.1 percent, from 1996. The decrease may be a result of the rise in the exchange rate and lack of jobs during the economic crisis in Korea. However, the proportion of illegal foreign workers to total foreign workers is still high.

Table 7. Trends in the Number of Foreign Laborers by Legal Status, 1994-1998

(Unit: persons, %)

Year	Total	Legal Workers	Trainees	Illegal Workers
1994	81,824(100.0)	5,265(6.4)	28,328(34.6)	48,231(58.9)
1996	210,494(100.0)	13,420(6.4)	68,020(32.3)	129,054(61.3)
1998	157,689(100.0)	11,143(7.1)	47,009(29.8)	99,537(63.1)

Source: MOL, *Labor White Paper*, each year.

In Korea, the ageing of the labor force has accelerated. The proportion of the economically active population of ages 45 or over increased from 39.1 percent in 1990 to 40.9 percent in 1999. Accordingly, an average age of the total economically active population increased from 32.2 years in 1990 to 34.3 years in 1999. This labour ageing phenomenon is expected to accelerate, as the total population ageing rises. On the other hand, it was attributable to the fact that aged workers want to work longer simply because they expect to live longer and are healthy enough to work even in relatively unpleasant workplaces. However, most aged workers are non-wage workers such as self-employed and family workers, and they are mostly employed in the agricultural or service sectors.

Table 8. *The Proportion of Economically Active Population of Ages 45 or over and An Average Age of Economically Active Population in Republic of Korea*

(Unit: %, years)

	Total		Male		Female	
	Prop. ¹⁾	Average ²⁾	Prop. ¹⁾	Average ²⁾	Prop. ¹⁾	Average ²⁾
1990	39.1	32.2	39.5	32.0	38.4	32.5
1991	39.1	32.1	39.6	32.1	38.4	32.2
1992	39.4	32.8	39.9	32.7	38.8	33.0
1993	39.3	31.5	39.7	31.5	38.6	31.7
1994	39.5	32.1	39.9	32.1	38.9	32.2
1995	39.7	32.3	40.1	32.2	39.1	32.3
1996	40.0	32.8	40.4	32.9	39.4	32.6
1997	40.3	33.7	40.8	34.1	39.7	33.3
1998	40.6	33.6	41.0	33.9	40.0	33.2
1999	40.9	34.3	41.2	34.3	40.4	34.4

Note: 1) The Proportion of Economically Active Population of Ages 45 or over

2) An Average Age of Economically Active Population

Source: NSO, *Annual Report on the Economically Active Population Survey*, each year.

2. Increase in Medical Costs

The increase in the elderly population has resulted in the rise of medical costs in Korea. At present health insurance or medical assistance (for those who are supported by the Livelihood Protection Law) programs cover all Koreans. As of 1995, 96.7 percent of these aged 65 or over were covered by health insurance and the rest of the elderly were covered by medical assistance. Despite the high coverage of health insurance, there was an increase in medical expenditures due to the population ageing in Korea. The health insurance cost for the elderly persons shows a speedier increase than the total population; the cost for older persons shows an increase rate 27.7 percent, compared with 18.7 percent for the total population between 1995 and 1998. The amount of medical insurance cost for the elderly accounted for 12.8 percent of the total cost in 1985 and increased to 15.9 percent in 1998. Even the medical costs per elderly person are over 2 times that of the population under age 65.

Table 9. *Medical Expenditure by Age in Korea, 1995 and 1998*

(Unit: bil. won, %)

Age	1995	1998	Growth rate	Per annual GR
0	1,122	1,582	141	12.15
1-4	2,756	4,353	158	16.46
5-9	1,875	3,263	174	20.29
10-14	1,217	1,740	143	12.66
15-19	1,397	2,252	161	17.25
20-24	2,129	2,788	131	9.41
25-29	3,275	4,880	149	14.22
30-34	3,033	4,365	144	12.91
35-39	2,936	4,793	163	17.74
40-44	2,469	4,450	180	21.71
45-49	2,482	4,142	167	18.61
50-54	2,958	4,387	148	14.03
55-59	3,144	5,624	179	21.38
60-64	2,668	5,276	198	25.51
65-69	2,085	4,140	199	25.68
70-74	1,505	3,029	201	26.24

75+	1,301	3,018	232	32.38
Total(A)	38,353	64,080	167	18.66
65 +(B)	4,892	10,187	208	27.70
B/A(%)	12.75	15.90		

Source : Korea Health Insurance Corporation, *Health Insurance Expenditure*, 2000

3. Growing Burden on the National Pension Scheme

Since the process of population ageing will continue to accelerate in the future, the financial crisis of the national pension is anticipated. According to an actuarial estimate, the total number of beneficiaries of the old age pension will increase rapidly although the number of insurants who pay contributions to pension will decrease. The number of pensioners will increase up to about 45 percent of the total number of the pension insurants, implying that the burden of the working age population will sharply increase. The total pension expenditure will exceed the total revenue by 2034. As a result, the accumulated pension reserve is expected to be exhausted in 2048. Thus, the population ageing in Korea will be a serious burden on the pension system, and the future young generations will have to pay heavy contributions in order to sustain the system.

To cope with the anticipated financial insustainability of the old age pension in Korea, the government took action in order to revise the National Pension Act in December 1998. The most notable change is the target replacement rate for the average wage workers of 40 years with contribution histories being reduced from 70 percent to 60 percent. Also the retirement age will be increased from 60 to 61 in 2013 and will rise one year every five years thereafter until reaching the age of 65 in 2033.

Table 10. Estimate of Pension Financing in Korea, 2000–2050

(Unit: 1,000 persons, 0.1 bil. won at constant price of 2000)

Year	Reserve (A)	Total Revenue (B)	Total expenditure (C)	Balance (B-A) (D)	Insurants (E)	Benefi- ciaries of old age Pension (F)	Maturity ratio (F/E) (G)	Funded ratio (A/C) (H)
2000	565,846	141,131	45,207	95,923	16,425	.363	2.2%	12.5
2005	1,338,037	268,783	46,547	222,236	17,470	1,101	6.3%	28.7
2010	2,489,249	414,791	90,782	324,008	18,199	1,780	9.8%	27.4
2015	3,813,478	524,016	152,704	371,312	18,141	2,392	13.2%	25.0
2020	5,166,792	655,605	260,537	395,068	17,674	3,545	20.1%	19.8
2025	6,025,718	704,601	424,010	280,590	17,036	4,969	29.2%	14.2
2030	6,309,898	768,113	603,656	164,458	16,318	6,094	37.3%	10.5
2034	5,906,253	752,760	753,661	-901	15,636	6,912	44.2%	7.8
2035	5,724,852	141,131	789,806	-37,346	15,500	7,067	45.6%	7.2
2040	4,256,564	726,316	984,919	-258,603	14,891	7,704	51.7%	4.3
2045	1,725,581	644,793	7,783,965	-539,173	14,315	8,076	56.4%	1.5
2048	-348,146	554,185	1,293,768	739,583	14,192	8,090	57.0%	-0.3
2050	-1,852,905	576,343	1,355,556	-779,212	14,092	7,993	56.7%	-1.4

Source: National Pension Research Center, *Actuarial Estimation of the National Pension*, 2000

D. Policy Options

1. Policies Related to the Population Ageing and Decline

In response to the rapid population ageing and population decline, Korea shifted its role to accommodate these dimensions in the future population policy directions. Under these circumstances, the government adopted a new directions and strategies of the population policy in June 1996, which focused primarily on population quality and welfare rather than on demographic arenas. The major goals of the new population policy were; 1) to maintain the replacement level of fertility and to improve morbidity and mortality levels as part of the process of achieving sustainable socio-economic development, 2) to enhance family health and welfare; 3) to prevent the imbalance of sex ratio at birth and to reduce the incidence of induced abortions, 4) to tackle sex-related problems of youths and adolescents, 5) to empower women by expanding their employment opportunities and welfare services, and 6) to improve work opportunities and provide adequate health care and welfare services for the elderly (Cho and Lee 1999). However, despite the transition of the population policy in Korea, the total fertility rate continuously declined from 1.7 in 1996 to 1.48 in 1998 (see Table 1). This phenomenon is expected to accelerate with the continuous increase in age at first marriage and the proportion of single women, which may make the recovery of fertility to its earlier level difficult.

Except the shift of the population policy in 1996, there have been no the direct policies, established and implemented, to address the determinants of expected population ageing and decline. However, it can be said that some indirect policies were used to check the rapid decline in fertility. These policies focus mainly on support for the compatibility of work and child rearing for women. These programs include such programs as, expansion of child-care institutions in the workplace, extension of maternity leave, adoption of paternity leave (in government sector), and payment of family allowance.

A policy has taken into consideration the influx of migrants in order to compensate for the expected decline of the working age population in Korea. Since the 1990s, foreign workers in Korea, most of them being illegal, have considerably increased. However, the government contends that approximately 200 thousand foreign workers, which is 1% of the total economically active population of Korea, is the optimum size for foreign worker within the country. Nowadays, the government is attempting to promulgate the Foreign Worker Permission Act, which will allow a certain number of foreign workers (around 1% of the total economically active population) to work, for less than three years, in Korea. The main aim of such legal reform is to prevent the illegalization of foreign trainees, who are allowed to train for two years under the Industry Trainee System, which started in the early 1990s.

An expert meeting, which was held at KIHASA in July 2000, suggested that preparations for the expected population ageing and decline should be taken into consideration. This meeting concluded that policies will inevitably have a difficult time reviving fertility; some policies such as the extension of child-care leave, payment of child allowance, and increase in compatibility between child rearing and work of women, need to be established in order to encourage women to marry and have the number of children they want.

2. Policies Related to the Consequences of the Demographic Transition

a) Policies on the Elderly

In response to the rapid increase of the elderly population, the Government has carried out various policy measures in order to keep the elderly healthy and active during their old age. Among these policy measures, income maintenance programs, health maintenance programs, and residential programs are important.

Public Pension Programs, Public Assistance based on the Livelihood Protection Law, and Non-contributory Old Age Pension are three components of public policy that aim at enhancing the economic security of the elderly in Korea. The main source of income for the majority of the retired old people is the savings or assets, which they made during their lifetime or support from their children. For the elderly who are not covered by the National Pension Scheme, which was started in 1988, a non-contributory old-age pension program was introduced in 1998 for the elderly in low-income brackets. Along with this, a public assistance allowance is provided for the elderly aged 65 or older, who are covered by the public assistance program. The government also provides various measures, for example, tax exemption, to enhance the income security for the aged.

To enhance employment of the elderly, there are three programs, which include the Elderly Job Placement Center, Elderly Workplace and Elderly Employment Promotion. Based on the Elderly Employment Promotion Program enacted in 1991, establishments with 300 employees are to employ the aged workers by more than 3 percent of the total employees. This Act also recommends that the government provide more training facilities and more job information for the aged workers. Although the Act lacks compulsory enforcement, its effects seem immense. The public enterprises extended the mandatory retirement age up to 60 and leading private enterprises followed the practices of the public sector.

For improving the health of the elderly through diagnosing geriatric diseases at an early stage and providing health education, the government has given subsidies to local health centers or hospitals for medical check-ups of low income elderly. The elderly who are suspected of some diseases through the first screening test should be given further examinations. Further, the rate of senile dementia among old age population is estimated to be 8.3 percent and the actual number is estimated to be about 240,000 persons in Korea. In order to care for the aged with senile dementia, the government has started a '10 year plan for senile dementia' from 1996 to 2005, which includes construction of nursing facilities and hospitals.

The weakening of traditional family support, the increase in the number of elderly living alone or as couples, and the need for social welfare services for the elderly who continue living in their own home, has caused the transformation of society. To improve community living- home help services, day care centers for the elderly, and short-term care centers are available for the elderly in need. In addition, the persons at risk of being admitted institutional which provide care has increased. Currently, welfare facilities for the aged are classified into three groups, which include residential homes, nursing homes for the severely disabled elderly, and geriatric hospitals. These facilities are divided into three categories, free of charge facilities, low-price facilities, and paying facilities, depending on ability to pay. The eligibility for free-of-charge or low-price facilities is confined to the low income group. The Government has recently increased

b) Policies on the women

In Korea, there have been great efforts to improve women's status, socially and economically. The government has prioritized policy regarding promotion of women rights and gender equality and equity. Particularly, the new government (1998) established the Presidential Commission on Women's Affairs (PCWA) at the ministerial level, aimed at planning, implementing, monitoring and evaluating policies related to women's empowerment and gender equality, in an integrated and effective manner. This Commission is to be renamed the Ministry of Women, in order to intensify its status and function. As for the employment status of women, the participation of women in the labor force gradually increased from 40.5 percent in 1981 to 59.8 percent in 1998 for married women, while the labor force participation rate remained at 46 percent for unmarried females. However, its rates are still low, in comparison with those of some developed countries.

To encourage women's economic participation, the Korean government has made efforts to increase the proportion of women in governmental committees, and plans to increase the proportion to 30 percent by 2002. A female public employee target system has been implemented to facilitate the recruitment of a target number of women into the public sector each year; the proportion of women employed in the public sector was 10 percent and was planned to reach 20 percent by 1999. And also, the Korean government has been trying to provide married women with more job opportunities by increasing the number of nurseries substantially by providing tax incentives for companies operating nurseries.

Table 11. Economic Participation Rate of Females, by Marital Status, 1981-1998

(Unit: %)

	1981	1985	1990	1996	1998
Total females	42.3	41.9	47.0	48.7	47.0
Unmarried	47.7	39.5	45.6	46.0	46.0
Married	40.5	41.9	46.8	50.5	59.8

Source: NSO, *Report on Economically Active Population, 1981-1998*.

Specifically, in order to provide support for the women's employment, the government introduced the Equal Employment Act in 1988, which prohibits discrimination against women in such areas as recruitment, promotion, training and job arrangements. Following the recent economic crisis, female workers were laid off due to gender in the process of corporate restructuring. Hence, the government revised the Labor Standard Act in 1998, prohibiting the discharge based on sex discrimination. The government has also been expanding job-training opportunities for women. In Korea, the policies for increasing the female labor force participation rate are a response to solving the expected labor shortage.

c) Policies on the labor supply

In response to the expected labor shortage, the mismatch problem of youth labor markets, which currently leads the high unemployment rate for the younger ages, needs to be solved, although it cannot be a solution for the problems inherited from the change in the age structure. Vocational training needs to be modified and flexible enough to meet the needs which will be caused by the expected labor shortage as well as changes in the other social and economic circumstances such as industrial structure, employment structure, production process, technology, and the education system. In addition, the vocational training needs to be provided not only for the youth but also for the female, the aged, and the disabled.

The government is very cautious in inviting foreign workers, fearing the possible undesirable social tensions and repercussions. Economic cooperation with North Korea could be a positive solution for solving labor shortage problems since North Korea workers have the technical know-how as well as disciplined spirit to be employed in labor intensive industries. At the same time, the government is trying to encourage investments in labor-saving technology in the hope that we can utilize the saved labor force in labor intensive industries.

Foreign direct investment in developing countries as well as increased investment in on the job training of unskilled domestic workers could solve the labor shortage in production workers. Therefore, the government has adopted a system of industrial training for foreigners as a means of mitigating the lack of labor, which allows a certain number of trainees and allots them to medium establishments suffering from lack of labor. The annual number of trainees has been between 10 and 30 thousand since 1992 and there are plans to have a total number of 93,800 foreign trainees by 1998. They have been allocated to manufacturers, construction, fishery, etc (MOL, 1999).

E. Conclusion

There is no doubt that the elderly will increase and the absolute size of the total population will decline in the future. Although the UN projected the size of net immigrants in Korea will remain constant in the future, it cannot be ensured that such maximum sizes are the most optimum in terms of the socio-economic, environmental and other factors. In other words, the criteria for projection of the numbers of net immigrants should be determined, taking into account all the factors to be included in addition to demographic factor.

However, experts agree that the change in population size and structure, specifically population ageing, will require an influx of foreign labor migrants to keep the national productivity that will help accommodate the promotion of quality of life for the whole population. Specifically, it provides an opportunity to emphasize to policy-makers that the future population policies need to be integrated with health, welfare and social security related policies.

Since the female participation in economic activity is still low in comparison with those in western countries, the policy for increasing women's economic participation will play an important role in compensating for the expected shortage of labor, through which the support for the increasing old persons can be helped. As a matter of fact, the Korean government has made efforts to improve conditions for encouraging female's employment; which include improvement on gender discrimination in employment and increases in compatibility of women's work with child rearing.

We should also consider the Korean governments' need to adopt policies, in order to maximize the older persons' capability for working, since the number of old persons who are healthy will continue to increase. In addition, reunification of two Koreas will attenuate the population ageing and decline, because of the decline of the working age population. Finally, faced with the increase in a healthy old population with the rise in life expectancy, the government needs to gradually increase the retirement age, which will contribute to stabilization of future health insurance and pension financing in Korea in the long run.

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